Civic engagement of HEI students in the co-creation of a Pan-European mapping app for socially inclusive HEI institutions and accessible European cities

PROJECT RESULT 4

AUTHORS: FILIPOVA M., TSVETKOVA-GABERSKA M., PELOROSSO R., ZINGONI A., CAMPORESE F., RUKO S., DIMITROVA N., HITOVA P., LAULE L., GORGUEIRA J., PAPPALARDO V., BARBAROSSA L.

SERVICE-LEARNING HANDBOOK - AN INNOVATIVE PEDAGOGICAL APPROACH TO ENGAGE STUDENTS AND TEACHERS FOR ACCESSIBILITY AND INCLUSIVITY

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Map4Accessibility develops a pan-European accessibility mapping app to provide information on the accessibility of public spaces across 4 European cities. The project employs service-learning to engage higher education students and other stakeholders in its community mapping practices. By combining community engagement and academic coursework, preparation and reflection both students and other stakeholders will learn through active engagement and work on a community-identified concern.

WHO ARE WE?

Map4Accessibility gathers 7 partners from 5 different EU Member States (Italy, Germany, Bulgaria, Portugal and Belgium) having complementary profiles allowing them to have the ideal competence-based mix to design and implement a truly impactful collaborative project.

More information on the project can be found at https://map4accessibility.eu/.

ABBREVIATIONS	
SL	Service-learning
PR	Project Results
HEI	Higher education institutions
EOSLHE	European Observatory of Service-Learning in Higher Education
LMS	Learning management systems

1. INTRODUCTION

The aim of Map4Accessibility is to foster Higher Educational Institution (HEI) service-learning (SL) through the implementation of various activities for community accessibility mapping for the improvement of the physical and digital accessibility of HEI institutions and cities. To achieve its purpose, the Map4Accessibility project targets multiple profiles including higher education students, higher education staff, people with disabilities, the elderly and residents in the areas being mapped. The project adopts a co-design process involving all stakeholders in all parts of the process from issues identification and understanding to mapping accessibility solution generation.

The implementation of **applications of service-learning handbook: an innovative pedagogical approach to engage students and teachers for accessibility and inclusivity** is done by participating in the creation of an innovative pedagogical approach (service learning) and by involving students, teachers and others interested in its use. A best practice guide has been produced on how to implement ECTS-recognised service learning as a pedagogical methodology in educational institutions (not limited to higher education institutions). It covers ways of involving students in real-life, community-based and needs-driven projects in addition to the theoretical knowledge acquired in their academic studies. The handbook has a focus on disability and inclusivity service-learning experiences for students.

On the other hand, the web application has been developed as a tool to map the physical and web accessibility of different sites and to provide accurate information about accessible locations at a 'city' level. It has provided feedback on the presence or absence of various facilities, identifying problems and meeting accessibility standards. It also applies universal design principles and adds improvements to existing facilities. People with disabilities will have access to important information about routes, facilities and services in real time.

THE SERVICE-LEARNING APPROACH

The analysis of the Service-learning (SL) approach was carried out in the two first project tasks. It aimed at providing an overview and benchmark community engagement practices for HEI Service-Learning Approaches. The main directions of the analysis are:

✓ Identifying initiatives within the European Observatory of Service-Learning in Higher Education (EOSLHE).

✓ Identifying additional initiatives and organisations by all consortium members (through personal networks and involvement initiatives in their area provided additional inputs to the existing initiatives on SL).

To reach above objectives, two Google Forms questionnaires on SL were distributed and analysed. Università degli Studi della Tuscia (UNITUS) created a questionnaire for the consortium partners while Association for Research and Training on Integration in Europe (ARFIE) prepared a second questionnaire to gather information from external stakeholders. Additionally, UNITUS investigated the EOLSHE database and the international literature. In this project, Service-Learning is defined as an educational approach involving projects and programmes of community service aiming to satisfy an actual need within a certain territory in collaboration with, but not only, the community. Students' participation is central - from the initial planning phase to the final evaluation - and intentionally linked with their learning experience, including curricula, reflections, skills development. The SL approach is complex and challenging; it implies seeing the institution as a civic space open to community reference groups (CRGs). It is a different way of conceiving the university and organising it as a 'community': or students, citizens and employees. SL presupposes links with the economic, social and cultural context in which the institution is located. The definition above derives from a comprehensive analysis of the EOSLHE (section 2.1) and the literature review (section 2.2).

Project results 1 and 2 of the EU ERASMUS+ funded Map4Accessibility project explore and investigate the possibilities for accessibility in an urban environment. The project includes an accessibility assessment of four European cities: Lisbon (Portugal), Berlin (Germany), Catania (Italy) and Blagoevgrad (Bulgaria). Exploratory walks were carried out with the participation of students from local universities. Using a pre-designed SL approach (based on an exploratory urban walk guide), students identified problems and sought approaches, with suggestions and solutions through mapping procedures. In the first phase of the project, through the SL-based guide for exploratory walks, approaches are sought to develop and implement the application - Map4Accessibility - as a public service, part of the SL initiative, but above all as a tool for users that is free, open, accessible and a multilingual tool for recording information about the urban environment. An SL pedagogical approach has been used to create it. This activity is included in PR3. A natural extension of the activities of the three-year Map4Accessibility project is the production of a handbook of best practices and guidelines, such as the Best Practices Guide, which explores ways of implementing ECTS-recognised Service Learning as a pedagogical methodology in educational institutions (without, of course, being limited to higher education institutions). It looks at ways of involving students in real-life, community-based and needs-driven projects in addition to the theoretical knowledge they acquire in their academic studies. The handbook focuses on the inclusion of people with disabilities. These experiences are also visualised with protocols (models) to facilitate the creation of an SL course. The purpose of the SL Protocol is to provide a framework for service-learning activities that integrate community service with academic learning, promote civic responsibility, and enhance student learning. It includes a step-by-step guide for implementing such a course in training.

2.1. The European Observatory of Service-Learning in Higher Education - EOSLHE[1]

Beside the information in PR1, EOSLHE, supported by European Association of Service-Learning in Higher Education (EASLHE), was created in January 2019 as a permanent space for cooperation and exchange among the members of the European network Europe Engage for collecting data, evidence, mapping and promoting the use of this learning methodology and its institutionalisation https://map4accessibility.eu/wp-content/uploads/2023/02/Project-Result-1-for-the-website.pdf. The aim of the EOSLHE is to enhance and disseminate the knowledge of SL in European higher education as an educational approach which enhances students' civic engagement and brings them closer to different social realities while allowing them to work in a real environment (as their first-hand experience allows them to witness the impact of their work).

2.1.1. Map of the Observatory's SL activities and initiatives

The complete picture of the geographic distribution of the analysed SL projects is presented in *Fig. 1*

Fig. 1. Map representing service-learning experiences (SL) in Europe (source https://www.eoslhe.eu/).

EASLHE promotes SL as an ideal teaching methodology for the development of civic engagement. The following definition of SL is given by EASLHE: ....*"Service-learning in higher education is an experiential educational method in which students engage in community service, reflect critically on this experience, and learn from it personally, socially and academically. The activities address human, social and environmental needs from the perspective of social justice and sustainable development, and aim at enriching learning in*

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[1] https://www.eoslhe.eu/

higher education, fostering civic responsibility and strengthening communities. Service-learning is always recognized with ECTS"…... https://www.eoslhe.eu/what-we-do/ . To assess the need to better understand SL and create a guide for its implementation, in the Map4accessibility analysis (updated as of July 2023) 110 projects[2] from a total of 18 European Countries, available on the EOSLHE website were reviewed. We analysed 110 SL projects in 18 European Countries *(Fig 2) - RP 1 of Map4accessiblity project*. According to EOSLHE, an SL experience is a description of a specific SL practice which took place within 1 academic year. All students having participated in SL experience share common service and learning objectives, reflection, dissemination, and evaluation activities *- RP 1 of Map4accessiblity project*.
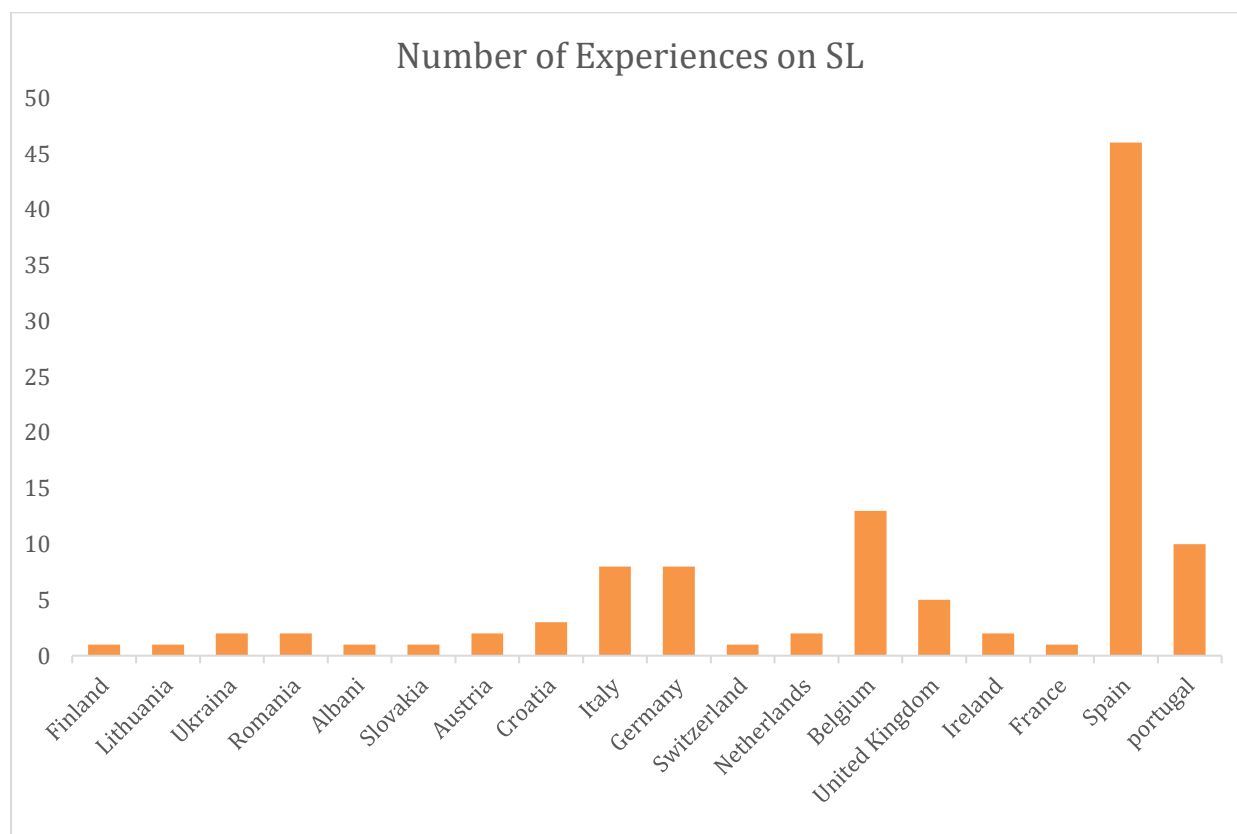

Fig. 2. SL projects per Country

All students participated in the experience over a specific period (such as a semester or an academic year), although they provided service for different social entities. According to the database of EOSLHE, up to date, several projects (47) face the topic of inclusion, and 15 projects present the word "disability" in their description. No project registered on EOSLHE investigates urban accessibility for disabled people - https://www.eoslhe.eu/wp-content/uploads/2022/02/Research-report_2021_web.pdf. The discipline that has been most applied in the SL experience is Education. It is visualized in Figure 3.

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[2] To note that the Observatory is continually update
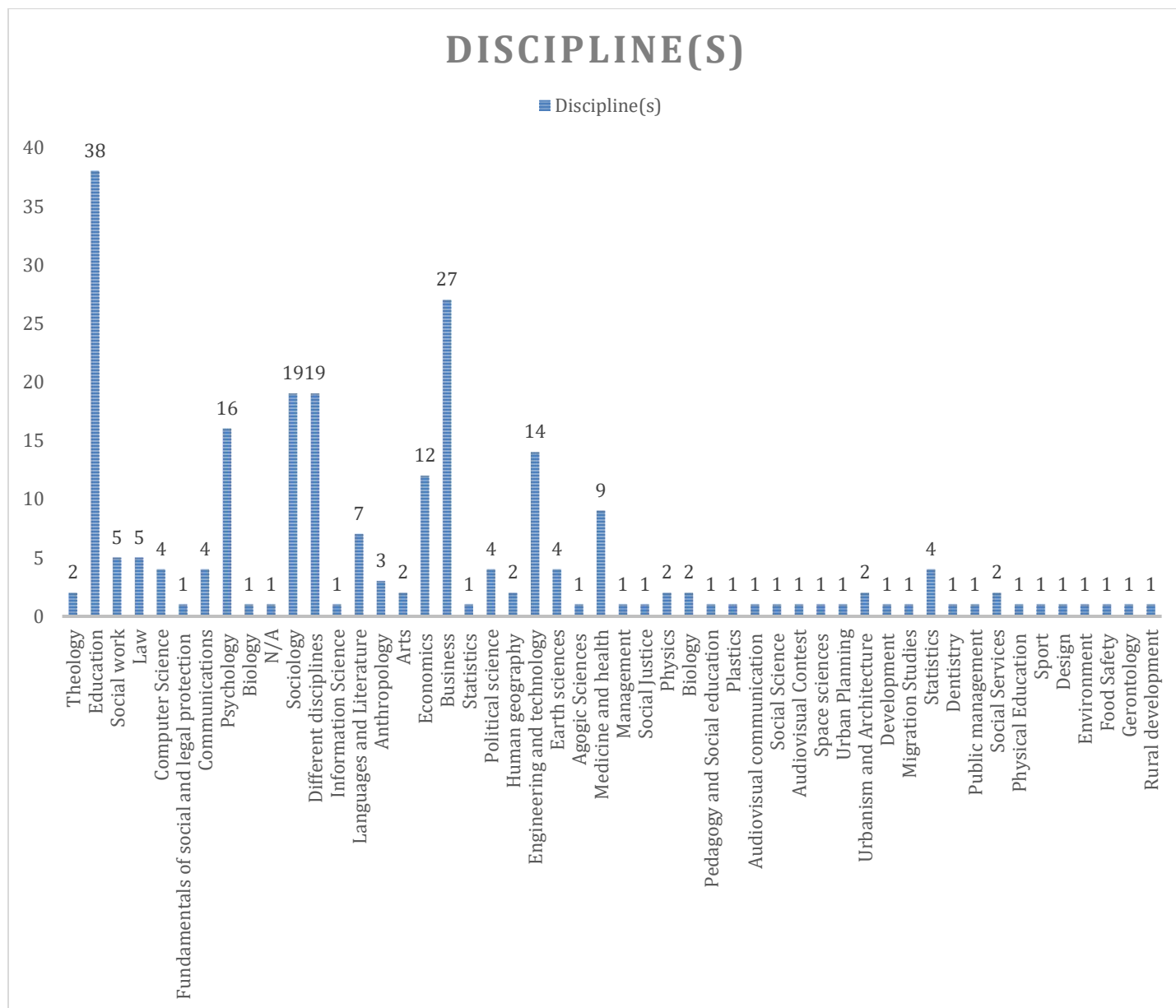
Fig. 3. SL projects per discipline

2.1.2. EASLHE POLICY RECOMMENDATIONS FOR SL INCLUSION IN HEI

Recently EASLHE published a Policy Brief entitled – A European Framework for the Institutionalization of Service-Learning in Higher Education (2021). In this report, a summary of challenges and recommendations for proper SL inclusion in HEI is displayed. Although the use and research of SL is growing in all the European countries, some countries are at the critical mass construction phase while others have already passed it and are

making progress in the institutionalization process. While in Ireland all rectors signed a declaration of their commitment to the community and in support of the SL methodology, in other countries, such as Denmark, Sweden and Greece, there is no evidence that this methodology is being used. A link to the full report on the EASLHE page could be find here: https://www.eoslhe.eu/wp-content/uploads/2022/02/Research-report_2021_web.pdf

The policy recommendations for the Higher Education Institutions proposed by EASLHE are to:

1. Include SL in the HEI strategy plan.
2. Create an SL program and structure to coordinate all activities, ensuring the necessary human and material resources.
3. Incorporate SL into existing academic programmes and promote it in collaboration with students, teachers and staff, assessing the needs of the local community and its existing capacities.
4. Provide high quality SL training to teachers.
5. Allocate time in the teachers' schedules to prepare, plan, guide and evaluate SL.
6. Internal and external recognition, both for teachers through promotion mechanisms and accreditation systems, and for students, who must obtain recognition of their participation in SL experiences in terms of ECTS.
7. Guarantee sustainability of the SL projects.
8. Promote both basic and applied research needed to examine how SL influences civic education and academic learning, and to provide evidence of the impact of SL on students, community, teachers, and participating entities.
9. Appoint a national SL Committee to formulate, review, and recommend general HEI curriculum, operational guidelines, policies, and tools and criteria for the evaluation of SL experiences that include indicators for assessing effects on the environment and on the various actors.

2.2. SERVICE-LEARNING IN ACADEMIC DISCIPLINES. A LITERATURE REVIEW

This handbook presents a systematic review of SL literature. It has been designed to serve as a working tool and a guide as well. In general, the findings of the studies in PR1 and PR4 show that SL has been widely reported in medical and nursing disciplines, followed by business and economics; computer science and information technology; sociology and criminal justice; teacher education; geography; environmental studies and linguistic and communication disciplines. However, in some academic disciplines, SL incorporation is still at its infancy, e.g., arts, mathematics, natural sciences, sports, engineering, hospitality and tourism. This will create an opportunity for a better understanding of the creation of a service learning course. Moreover, findings of this cluster have revealed that SL integration is equally popular in traditional classroom (i.e., face-to-face learning) and online learning mediums. Therefore, SL is a frequently reported approach in experiential learning methods. To bridge this gap in literature, a systematic literature review was performed. SL in different courses, e.g. criminal and social justice (Burke and Bush 2013; Davis etal. 2014; Toporek and Worthington 2014), social work (Postlethwait, 2012) and research based technical writing courses (Soria and Weiner 2013; Stevens 2014). In this regard, Burke, and Bush (2013) have described the usefulness of SL in undergraduate students during their

criminal justice course. Further, M. Salam et al. (2017, 2019) and Burke and Bush (2013) reported that their students found SL projects beneficial for them; however, there were some obstacles related to the required time and the limited resources, as well as some restrictions from students' families for participating in SL projects. Similar findings of another study by Davis et al. (2014) from the criminal justice discipline support the notion of SL pedagogy and validate its positive impact on students' learning outcomes. Another recent study by Tracey and Kacin (2014) has proposed a design case framework for incorporating e-service learning in online courses. They have entailed a detailed description of processes involved in the development of a virtual collaboration environment between SL participants, using modern ICT tools, e.g. email, instant messaging, Microsoft Teams, Skype, Zoom and Google applications. Moreover, Tracey and Kacin (2014) identified a set of good practices for integrating e-service learning in online courses, with the support of ICT for creating a virtual environment - https://www.researchgate.net/publication/300268208_Designing_Authentic_Educational_Experiences_Through _Virtual_Service_Learning. Numerous research (Furco and Billig, 2002; Gregorová, Heinzová and Chovancová, 2016) have highlighted that SL activities raise competence levels, school and university activities participation, the motivation to study, to improve self-esteem which favour the acquisition of pro-social behaviours.

The objective of these initiatives is to create paths that can convey the importance of responsibility and commitment to the community and to the common good: students who participate in these experiences grow in terms of the development of their sense of humanity, as they experience first-hand the values of solidarity, inclusion, civic engagement. In the same way the same students learn more easily and achieve better results than peers who have not participated in this type of activity. According to Shelley H. Billig (2000) SL facilitates the achievement of certain objectives and the acquisition of the competence objectives envisaged by the various study paths (https://map4accessibility.eu/project-results/).

2.3 GUIDELINE FOR SL INCLUSION ON HEI COURSES

The EASLHE elaborated guidelines for the Institutionalisation of SL in European higher education in 2021[3]. The following paragraph reports a discursive of them integrated with an additional literature review. According to the information from PR1 https://map4accessibility.eu/project-results/ , the vision of school or university that the SL proposes, pushes the realisation and care of alliances with various external stakeholders, allowing the different systems (educational, economic, social, cultural, etc.) to interact, favouring a closer connection between 'inside' and 'outside' the classroom, overcoming the dichotomy between theory and practice and between school/university and real life. Assuming that the vision of school or university represents the cultural background within which to build SL interventions, SL introduction cannot be improvised, but requires training for the teaching staff, both at the beginning and during the implementation. The training and professional development of teachers, both initial and in progress, is the starting point for a significant project action. Issues concerning the approach of SL, for an initial presentation, the active teaching methodologies it promotes, the tools and the evaluation methods are aspects that must have taken care of for the success of the path. These interventions favour and support the sharing, dissemination, and continuity over time of these projects. In the same way it is important to foresee and implement monitoring activities (questionnaires, interviews, etc.) aimed at analysing the

impact of the project actions on the reference community and on the subjects involved in the phases of the SL project also to highlight the strengths and weaknesses of each path with a view to continuous improvement. From an organisational point of view, SL paths require more adaptability of the HEI courses, also under the point of view of scheduled activities and additional time required to properly realise SL projects. The observed experiences include laboratory activities, procrastination of a collaborative nature and paths that favour the learning of transversal skills that also take place outside the school/university itself. All this highlights that the lesson time consisting of sixty minutes is not enough to achieve these objectives. SL can complement teaching with commitment to the community in which the university or school is located. The systemic approach allows schools or universities that use SL to create learning/service paths aimed at developing disciplinary and transversal skills based on the active participation of students and the various subjects present in the territorial and social context in which the school or university is inserted. SL promotes a vision of open school and university, in constant relationship with the outside. The SL promotes in the student the acquisition of knowledge, values, skills, and attitudes associated with civic engagement through a structured experience within the school, university and territorial community. In other words, SL transforms what and how it is learned, as is based on an approach that favours learning based on the figure of the student, intended as a tool and source of knowledge, and supports the renewal and reconfiguration of ways, spaces and times of learning.

2.3.1. QUALITY STANDARDS FOR A CORRECT IMPLEMENTATION OF SL

The definition of quality standards for SL activities has been faced in a recent project 'Europe Engage – Developing a Culture of Civic Engagement Through Service-Learning Within Higher Education in Europe', (Erasmus+ 2015-2017). According with the report of Prof. Stark[4], SL is a running target and benchmarking SL activities should be considered an ongoing process. Thus, quality standards for SL activities should not aim at standardizing or unifying SL. Instead, they must "offer that the standard for SL lies in its inherent diversity and creativity to develop new and innovative formats for experience-based learning".

It's therefore better to define a minimum set of standards to serve as a guideline of indicators to design or evaluate SL activities. These minimum standards should be fulfilled for good quality SL projects.

The minimum quality standards (also called elements) that characterize an SL project are:
- Meeting the true and felt needs of a community.
- Students are the protagonists in every phase of implementation of the activities (from the analysis to the final phase).
- The activities are integrated with the curriculum/study plan and in relation to the students' learning objectives.
- The dimension of reflection accompanies the unfolding of activities.
- It supports the development of a network of relationships, inside and outside the school.

- The dimension of reciprocity is promoted and present among the subjects (school, university, and community) involved.

We are in the presence of an SL path when:

- The activities are linked to the curriculum/study plan: the link with the disciplines is evident and identified jointly between teachers,
- The theme/problem on which the activities are based is significant and ensures the involvement of all students, guaranteeing them a leading role,
- The community outside the school or university actively participates, also through the establishment of networks and alliances on the territory and with the subjects that contribute to the realization of the activities. It is precisely the concept of 'reciprocity' that distinguishes SL from other forms of school-territory collaboration, as it is based on an interchange that takes place between the participant in the service and the individual or social agency that receives the service. During the activities the student actively participate and learn in the same way.
- The paths are institutionalised and are not episodic: the presence of the SL in the official documents of the school at the level of the training offer works to overcome an episodic vision of the experiences in support of a widespread diffusion within the institutions. The SL approach is not realized with the design of additional activities but with the implementation of structured and continuous activities over time (beyond the end of the project and beyond the end of the school or academic year).
- A process is started that integrates knowledge with know-how, transforms learning spaces by opening up to external contexts and reorganizes time at school or university to support activities that undermine the traditional setting of the lesson, supporting an orientation 'beyond the classroom'.

The activation of an SL path starts from a careful analysis of the needs of the territory and the community in which the school/university is placed, to verify the possibility of starting intervention strategies that combine the specific learning objectives of the educational institution with the active service to the local community.

It is very important that the action of SL is linked to a real need that emerges from the territorial context that welcomes the school and that has an interdisciplinary opening; among the actions of SL are particularly appreciable also the models of intervention that have replicability characteristics and that, with some specific implementations, can express intervention actions even in areas and circumstances other than that of their first implementation. For a correct planning of the intervention, it is important that the objectives to be pursued are well defined, both in relation to the skills the students need to acquire, and in reference to the socio-relational objectives to be satisfied. The involvement of students in each phase of project implementation remains a central element, as the sharing of objectives promotes accountability with respect to the achievement of the latest results and activates meaningful learning processes in young people.

Finally, it is essential a constant enhancement of the centrality of the curriculum to underline the structural connotation of the SL methodology, while reinforcing the acquisition of skills. The more the project is linked to the curricular learning objectives, the more students participate in it in a conscious and active way. Hence, SL activities should not be promoted as sporadic, extracurricular learning opportunities, but as structured didactic actions, defining the teaching experience as a path that involves the disciplines in a transversal way, acting at the same time on the acquisition of transversal skills (soft skills).

2.3.2. THE DETERMINANTS FOR SL

The actors actively involved in the realisation of the SL path are numerous and different according to the different phases of project design/implementation. From an organizational and managerial point of view, the role of the teacher is fundamental above all in the early planning stages, for the definition of learning paths implemented in coherence with the curriculum/study plan. The teacher also plays a central role from a managerial and administrative point of view in the phases of stipulation of any agreements, protocols and/or agreements with local authorities or territorial associations, where this is necessary; they assume a central role also in the preliminary phases concerning administrative-accounting feasibility studies and in the preventive assessments on the economic resources and administrative conditions available in order to profile any needs and to carry out, where appropriate, sponsorship interventions or partnerships with public and/or private institutions. Not infrequently the teacher is the first main promoter and activator of the culture of SL as a tool for authentic formation. The active participation of teachers, alongside the students, in every phase of the project, even after the first moment of the design, guarantees the sustainability of the intervention through the monitoring of the different phases of the project, allowing an ongoing evaluation of the quality of the objectives achieved and at the same time detection of possible critical issues for any remodulations of the action. The involvement of the entire Class/Course gives the action a broader and better calibrated level of formal structuring in relation to the specific objectives to be pursued and considering the group of students involved in the project. The reflection on the implementation of the projects on the didactic-curricular level has stimulated a rethinking on the theme of spaces and learning environments leading to an extension of learning environments beyond the perimeter of the classroom. The assessment of the skills acquired in the SL paths is important to make this type of learning experience in a situation fully assessable and widely documentable. The creation of relationships between university, schools, the territory and local communities is an essential prerequisite for the success of the project and at the same time constitutes one of the objectives of SL's action; in some projects, communication strategies are crucial in the phases of returning outputs to the local community, not only in terms of documentation and reporting of the results of the project, but even more so in consideration of the creation of a virtuous exchange channel between the educational institution and the territorial reality. The sharing of the final results of the SL project is a way of promoting awareness and recognition of mutual belonging, of the school to the territory and of the students to the local community.

2.3.3. E-LEARNING AND SL: SOME CONSIDERATIONS

The Covid-19 pandemic pushed the digitalisation of universities. The 2021 Annual report of EASLHE[5] argues that e-Service-Learning (e-SL) should actively engage students in the online learning process with a technological mediation (PR 1 - https://map4accessibility.eu/project-results/). Due to the global COVID-19 pandemic, the research on e-SL has expanded significantly, in conjunction with the increase of online teaching dimension. The major challenge of e-SL implementation is related to proper linking the methodology with digital

technologies and the lack of training of HEI in the use of technologies has made the scenario even more complex. The role of technologies in e-SL pedagogy is still not fully explored. Indeed, e-SL asks for a generalized framework for all types of online services; specifically, to understand how projects can develop in terms of virtual design and how and to what extent technology can be included in the projects. Traditional SL can benefit from e-learning methods. One of the advantages of e-learning is that it can provide related learning resources based on learners' personal needs, goals, abilities, and interests.

Personalized learning allows learners to set personal learning goals, in which it is necessary to understand the needs of everyone. The research indicates that personalized learning has become increasingly essential to implement and accommodate individual learner differences over the past decade. Tarabasz et al. (2019) suggested that integrating the latest digital technologies and innovations into the learning environment are a competitive advantage and the key to success in an educational setting.

Tab. 1.Example of Moodle Tab for general SL purposes	
Background and motivation	
General objectives of the project, timing and strategies	Examples: encourage the development of meaningful learning processes. train students in social and participatory responsibility. promote individual growth and social inclusion encourage collaboration and the sharing of experiences encourage acceptance of the other. identify accessibility issues in urban contexts
Phases of project design	……………………………
Distinctive elements and design originality	…………………………..
Teaching methodologies and resources for the realization of the experience	……………………………
Results and impacts	…………………………………
Evaluation methods	…………………………….

The SL, and in particular, the e-SL can benefit for some technological tools as the learning management systems (LMSs). A LMS is a software application for the administration, documentation, tracking, reporting, automation, and delivery of educational courses, training programs, materials or learning and development programs. LMSs are online platform that stores large quantities of teaching materials in a digitized format. LMSs are characterized by a user-friendly interface where educators can easily manage content, automate tasks, and streamline their curriculum from any remote location. Some popular LMSs used by HEI include Moodle,

Blackboard Learn and Schoology. Among the numerous LMSs, Moodle[6] is free, open-source software supporting expanding and modularized system functions and services to facilitate online courses or online resources and interactive activities. Nowadays, Moodle is the most widely used open-source e-learning environment in the world. Moodle could support e-SL/SL integration in HEI by providing a structured platform able to increase accessibility of information and connectivity among users in the same university and in the world (students, teachers, project partners). A future step could be the upload of SL experiences (as the urban walks in Map4Accessibility) on an SLM platform. As an example, teachers could have access to a university SLM tab to systematize the contents (reports, slides, audio-video) and apply the SL approach (see Tab. 1). The following information could be then shared within students' groups and interested people increasing the impact and effectiveness of e-SL/SL. An example of Moodle and SL integration has been reported by Chang and Yeh (2014)[7] to design a ubiquitous learning system for college students to support the experience learning in serving disadvantaged groups (*PR1 - https://map4accessibility.eu/*) .

3. IMPLEMENTATION OF SERVICE LEARNING

3.1. PRACTICAL PROTOCOL ON HOW TO IMPLEMENT SERVICE LEARNING EFFECTIVELY

Service learning is a powerful educational approach that combines classroom instruction with meaningful community service. It not only enriches students. The development of protocols and a better understanding of SL is being worked on by a number of authors (Billing S ., 2000); Bringle, R. G., & Hatcher, J. A. (1996); Cress, C. M., Collier, P. J., & Reitenauer, V. L. (2005) ; Jacoby, B. (2014); Honnet, Ellen P, and Susan J. Poulsen. (1989); Felten, P., & Clayton, P. H. (2011); Stoecker, R., & Tryon, E. (2009); Yoong SQ, et al., (2022); Winter, Ch. (2023). Detailed information and tools for creating an SL course are available in the following links: *National Youth Leadership Council. (n.d.). Retrieved from https://www.nylc.org; Needs Assessment Guidebook - OESE (OESE); Community Tool Box (Community Tool Box), Needs Assessment Guidebook - OESE (OESE).* The protocol for implementing service learning *(Fig. 4):*

1. **Needs Assessment:** An initial needs assessment may include an analysis approach, survey and questionnaire, group format and approach. Carry out an organisational needs assessment to identify the current knowledge base and further training requirements. Identify the needs of both the community and the students. It could be used surveys, interviews with stakeholders for deeper exploration of topics, questionnaires with target specific information about community needs and student interests, focus groups with leaders, members, students and faculty. Establish a committee of stakeholders and interdisciplinary members.

   Answer the question: What are the issues that require attention, and how can your students contribute meaningfully?
   For a better understanding of the creation of a course in Service learning, it is appropriate to give an example from the Map4accessibility project. Questionnaires, questionnaires for stakeholder, explorative

walk survey, case studies and urban walks were used to create the mapping website and app. They are adapted, co-designed and co-developed through service-learning student activities. By the mapping tools, (embedding Universal Design Principles), they provide accessibility information at the city level in 4 cities across Europe –Lisboa, Catania, Berlin, Blagoevgrad (https://map4accessibility.eu/project-results/).

2. **Learning Objectives**: Define clear learning objectives that align with your curriculum and the service project. Make sure these objectives are measurable and achievable. Critical thinking, problem solving, communication, teamwork and civic responsibility are also important to enhance the educational objectives and curriculum. The education sessions may consist of presentations and case studies.

Answer the question: What specific skills, knowledge, and attitudes do you want your students to gain through this experience?

Creating an application is one of the main activities of Map4Accessibility, the project is being developed as part of the SL initiative. The main objective of the three-year project is to provide users (mainly people with disabilities) a free and accessible tool to record information about the urban environment. Through case studies, explorative walks and urban walks the students acquired skills to recognize the possibilities of people with different types of disabilities to go through the various obstacles in an urban environment. For the measurement of skills it is appropriate to use different questionnaires and surveys.

3. **Project Design**: Design a service project that addresses the identified community needs while aligning with your learning objectives. This could involve activities such as tutoring, environmental clean-up, healthcare support, or creating educational resources. Ensure that the project is meaningful, sustainable, and safe for all participants.

Answer the question: How can you design a safe, sustainable service project that meets community needs and your learning goals?

4. **Pre-Service Preparation**: Prepare your students for the service experience. Provide background information on the community issue, the organisation they will be working with, and any necessary skills or training. Discuss ethical considerations, cultural sensitivity, and safety protocols.

Answer the question: How can you effectively equip students with the knowledge, skills, and awareness needed for a successful service experience?

Fig. 4. Implementing Service Learning: steps for the practical protocol

5. **Reflection Activities**: Incorporate structured reflection activities throughout the service-learning process. These could be group discussions, journaling, or guided reflections. Reflection helps students connect their service experience to their learning objectives, fostering deeper understanding and personal growth.

    Answer the question: How can you use proven reflection methods to help students learn and grow more during service-learning?

6. **Implementation**: Execute the service project in collaboration with the community partners. Ensure regular communication, supervision, and support for students during their service activities. Encourage them to apply what they've learned in the classroom to real-world situations. Collaborative assessment and teamwork are beneficial for implementing the guidelines successfully.

    Answer the question: What best practices should be followed to effectively manage and enhance student learning during a service project with community partners?

7. **Ongoing Assessment**: Continuously assess both the learning outcomes and the impact on the community. Use formative assessments and feedback loops to make necessary adjustments. Ongoing assessment in service learning involves student learning outcomes and the impact on the community as quizzes, reflections, or checkpoints throughout the service learning experience - intended knowledge, skills, and attitudes. Folders, posters, brochures and leaflets can be used as ongoing reminders.

8. **Post-Service Reflection**: After completing the service project, facilitate a comprehensive reflection session. Encourage students to share their experiences, insights, challenges, and personal growth. Help them connect their service experience to broader societal issues - Learning Integration, critical thinking and personal growth.

Answer the question: Are the students achieving the intended learning objectives? Is the community benefiting from the service?

9. **Celebration and Recognition**: Celebrate the achievements of your students and acknowledge their contributions. This could be through certificates, presentations, or community events. Recognising their efforts enhances their sense of accomplishment and motivates future engagement. Celebrate milestones and achievements.

10. **Continuous Improvement**: Use the feedback gathered from stakeholders, students, and community partners to refine your service-learning approach for future implementations. Each cycle should build upon the lessons learned to create more impactful experiences.

In Conclusion, implementing service learning involves a structured protocol that ensures the integration of community service with educational goals. By following this protocol, educators can create meaningful experiences that empower students, foster community engagement, and promote lifelong learning.

3.2. STEP-BY-STEP APPROACH FOR <u>UNIVERSITIES</u> TO INTRODUCE SERVICE LEARNING INTO THE PROGRAMS THEY TEACH:

Step 1: Awareness and Buy-In
- Tip: Raise awareness among faculty, students, and administration about the benefits of service learning.

Step 2: Identify Suitable Courses
- Tip: Choose courses that align with service learning's objectives and have potential for community engagement.

Step 3: Faculty Training
- Tip: Offer workshops to guide instructors on integrating service learning effectively.

Step 4: Define Learning Objectives
- Tip: Clearly articulate what students should learn through the service experience.

Step 5: Partnership Development
- Tip: Establish relationships with community partners, NGOs, or local organizations.

Step 6: Project Design
- Tip: Collaborate with partners to create meaningful projects that address community needs and align with curriculum.

Step 7: Pre-Service Preparation
- Tip: Prepare students for their roles through orientations and training.

Step 8: Service Implementation
- Tip: Execute the project, maintaining regular communication with partners.

Step 9: Reflection and Assessment
- Tip: Incorporate reflection activities to help students connect service with learning objectives.

Step 10: Feedback Gathering
- Tip: Collect feedback from students, faculty, and partners to identify strengths and areas for improvement.

Step 11: Recognition and Celebration
- Tip: Acknowledge student contributions through certificates, events, or presentations.

Step 12: Continuous Improvement
- Tip: Use feedback to refine future service-learning initiatives for better outcomes.

Step 13: Scaling Up
- Tip: Gradually expand service learning across more programs and courses.

  Simplicity and clear communication are the key. By breaking down the process into these steps, universities can smoothly introduce service learning into their programs while ensuring meaningful experiences for students and positive impact on communities.

A. EXAMPLE OF SERVICE-LEARNING PROJECT:

1. *Community Garden Project:*
   - Step 1: Identify a local community lacking access to fresh produce.
   - Step 2: Define learning objectives, e.g., understanding sustainable agriculture.
   - Step 3: Design garden layout, plan planting, and maintenance.
   - Step 4: Pre-service prep: Learn about gardening techniques.
   - Step 5: Implement project: Plant, tend, and harvest crops.
   - Step 6: Reflect on the experience and community impact.
   - Step 7: Assess learning outcomes and garden's contribution.
   - Step 8: Celebration event or sharing the produce with the community.
   - Step 9: Gather feedback for improvements.

2. *Tutoring Program:*
   - Step 1: Identify a local school or organization needing academic support.
   - Step 2: Set learning objectives like improving communication skills.
   - Step 3: Plan tutoring schedules and subjects.
   - Step 4: Pre-service prep: Training on effective tutoring.
   - Step 5: Implement project: Conduct tutoring sessions.
   - Step 6: Reflect on tutoring experiences and student progress.
   - Step 7: Assess learning outcomes and impact on students.
   - Step 8: Organize an appreciation event for tutors and learners.
   - Step 9: Collect feedback and insights for refinement.

B.   FORMALISING SERVICE LEARNING AT <u>INSTITUTIONAL LEVEL</u>:

1. **Engage Leadership:**
   - Step 1: Present the benefits of service learning to administration.
   - Step 2: Highlight alignment with the institution's mission and values.
   - Step 3: Gain support and resources for implementation.

2. **Curriculum Integration:**
   - Step 1: Identify courses suitable for service learning.
   - Step 2: Collaborate with faculty to align learning objectives.
   - Step 3: Integrate service-learning components into syllabi.

3. **Faculty Development:**
   - Step 1: Offer workshops on service-learning pedagogy.
   - Step 2: Provide resources, templates, and best practices.
   - Step 3: Encourage faculty to share experiences and outcomes.

4. **Community Partnerships:**
   - Step 1: Establish connections with local organizations.
   - Step 2: Discuss potential projects and mutual benefits.
   - Step 3: Formalize partnerships through agreements.

5. **Student Engagement:**
   - Step 1: Promote service-learning opportunities to students.
   - Step 2: Explain the benefits and learning objectives.
   - Step 3: Facilitate sign-ups

C. IMPLEMENTING SERVICE LEARNING IN THE CONTEXT OF PROVIDING PHYSIOTHERAPY SUPPORT BY SWU "NEOFIT RILSKI" TO PEOPLE WITH DISABILITIES:

Step 1: Needs Assessment
Identify the specific needs of the disabled community you want to support. Understand their challenges, limitations, and areas where physiotherapy can make a difference.

Step 2: Learning Objectives
Define clear learning objectives for your students. These could include developing a deep understanding of various disabilities, honing physiotherapy techniques, enhancing communication skills, and fostering empathy.

Step 3: Partnership Development
Collaborate with local disability organizations, rehabilitation centers, or special education schools. Establish relationships to create a foundation for your service learning initiative.

Step 4: Project Design
Design projects that offer meaningful support to individuals with disabilities while allowing students to apply their physiotherapy knowledge. These could involve developing personalized exercise plans, conducting therapeutic activities, or providing mobility assistance.

Step 5: Pre-Service Preparation
Train students on disability awareness, effective communication, patient rights, and culturally sensitive practices. Provide them with the necessary skills to work with diverse individuals.

Step 6: Implementation of Service
Execute the physiotherapy support project, ensuring close communication with partner organizations and regular feedback from participants.

Step 7: Reflection and Learning
Incorporate reflection sessions into the service learning process. Encourage students to share their experiences, insights, and challenges. Discuss how the practical work aligns with their learning objectives.

Step 8: Assessment
Assess students based on their learning outcomes, communication skills, and ability to adapt physiotherapy techniques to individual needs. Use rubrics to measure their growth.

Step 9: Participant Feedback
Gather feedback from the individuals with disabilities who received physiotherapy support. Their perspectives are invaluable in understanding the impact of the service.

Step 10: Community Presentation
Have students present their experiences and learnings to the community, sharing success stories, challenges, and the overall impact of their service.

Step 11: Continuous Improvement
Use feedback from students, participants, and partners to refine the service-learning approach for subsequent implementations. This iterative process enhances the effectiveness of future initiatives.

Step 12: Long-Term Engagement
Consider how you can maintain an ongoing relationship with the disability community. This could involve establishing a regular service program or creating resources that provide lasting support.

By following these steps, you can implement a service-learning **program in Physiotherapy that not only enriches students' education but also makes a positive difference in the lives of people with disabilities.**

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Appendix A - List of Map4accessibility Partners

Organisation name	Acronym	Country	Organisation type
1) Università degli Studi della Tuscia (Coordinator)	UNITUS	Italy	Higher education institution (tertiary level)
2) Association de Recherche et de Formation sur l'Insertion en Europe	ARFIE	Belgium	Non-governmental organization/association
3) ESCP (Business School) Europe Wirtschaftshochschule Berlin Ev	ESCP	Germany	Higher education institution (tertiary level)
4) Università degli Studi di Catania	UNICT	Italy	Higher education institution (tertiary level)
5) South-West University "Neofit Rilski"	SWU	Bulgaria	Higher education institution (tertiary level)
6) Associação Salvador	AS	Portugal	Non-governmental organization/association
7) EUROPROJECT OOD	EP	Bulgaria	Small and medium-sized enterprises