

The logo for IDOL (Intergenerational Digital Service-Learning) features the letters 'i', 'D', 'O', and 'L' in a stylized, white, sans-serif font. The 'i' has a blue dot, the 'D' has a blue vertical bar on its left side, the 'O' has a blue dot in its center, and the 'L' has a blue vertical bar on its right side. The background of the top half of the cover is a dark blue and purple gradient with a pattern of small white dots and lines, resembling a digital or network structure. A photograph of two people, a man and a woman, looking at a laptop is visible in the top right corner, partially obscured by the IDOL logo.

IDOL

Practical Guide to Intergenerational Digital Service- Learning

Exploring
Intergenerational
Learning through
Service-Learning in a
Digital Higher Education
Arena

www.digitalservicelearning.eu

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INTRODUCTON

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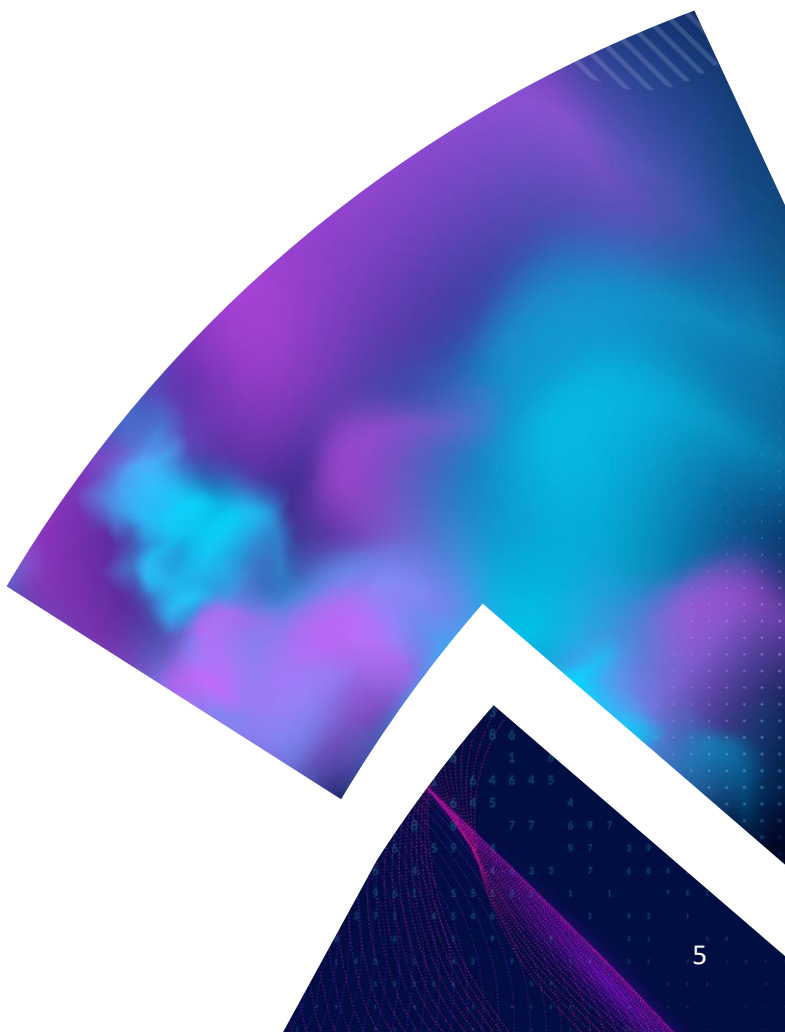


COVID-19 has impressively shown how conceptions of ‘age’ can divide generations at a time when social cohesion and intergenerational solidarity are particularly important. Media has portrayed many older people as vulnerable, weak and in need of protection. Similarly, intergenerational tension was felt among the younger population, as social distancing and other public health measures were primarily aimed to benefit older generations, yet the economic and social costs of these measures were imposed overwhelmingly on young people. At the same time, the pressure felt by younger people to live up to moral expectations was high, and when not done as expected they were denounced as selfish. Therein, intergenerational solidarity is now needed more than ever.

Intergenerational digital service-learning represents a pedagogical approach that has the potential to address the issue of intergenerational solidarity.

It faces concerns for the civic engagement responsibilities of higher education institutions (HEIs) during the pandemic and the need to help students tackle intergenerational tension, while also meeting community needs. Intergenerational digital service-learning, hence, meets the requirements of the Third Mission and social responsibility of HEIs. HE managers and wider education stakeholders are aware of the fact that they need scalable, practical ways to integrate democratic and social values into curricula and study programmes so as to better prepare students for 21st century adult life. Intergenerational digital service-learning also has enormous potential to address the multiple negative impacts of the pandemic, and by engaging more people in service-learning and civic activities, intergenerational digital service-learning can contribute to a more inclusive society.

“Service-learning is the various pedagogies that link community service and academic study.” (Ehrlich, 1996). Service-learning connects university learning and community service, and thus contains both a ‘service’ and a ‘learning’ experience for students. It can include services in schools, public institutions, non-profit organisations or other community partners. Service-learning is seen as a multi-stakeholder practice between the HEI, the lecturers, students, and community partners that brings benefits for all sides (Rutti et al., 2016).





SERVICE-LEARNING is an increasingly popular pedagogy across HEI as a way for universities to achieve their Third Mission goals of impacting society by consolidating student learning with community needs. However, with the pandemic, the practical facilitation of service-learning was hindered by distance learning. Many lecturers felt ill equipped to shift the didactic model of service-learning into the digital sphere.

INTERGENERATIONAL DIGITAL SERVICE-LEARNING presents an innovative approach to service-learning, incorporating a digital and an intergenerational element. The Erasmus+ project **Intergenerational Digital Service-Learning (IDOL)** presents an innovative approach to service-learning, incorporating a digital and intergenerational element, as well as an innovative pedagogical model for internal “teaching tandems” across HEI units. The guide comprises a research-based resource and establishes the conceptual foundations of intergenerational digital service-learning.



The **RESEARCH QUESTION** of the guide is: **Which conceptions and practices of intergenerational digital service-learning in higher education exist in Europe and how can they be described?**

The **OBJECTIVE OF THE GUIDE** is to raise awareness and build a compelling case for introducing intergenerational digital service-learning into HEIs work with students. Aimed at HEI educators and HE managers, the guide has three objectives:

- 1 Explain what intergenerational digital service-learning is and the learning opportunities it offers
- 2 Illustrate the value of using intergenerational digital service-learning to develop key competences and engagement, especially with students
- 3 Motivate HEI educators and stakeholders with practical guidance on how to introduce intergenerational digital service-learning into their organisations and to collaborate with different HEI departments for practical implementation

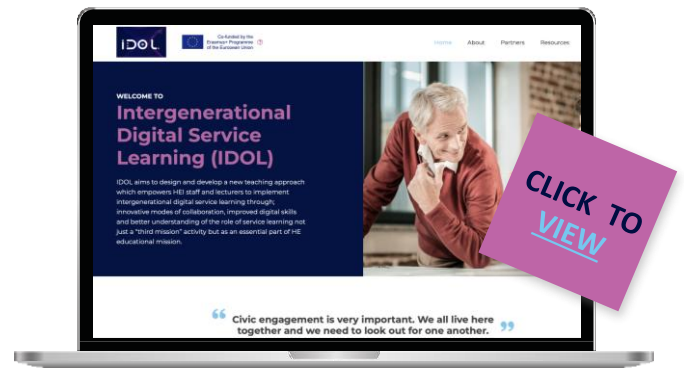
Added value: Whereas many research projects have produced resources for service-learning for students, this is the first time a guide has been developed specifically with both an **intergenerational and digital element** in service-learning. The content of the guide will be presented in a document (PDF) format, with best practices on both elements and links to further online and/or multimedia resources where appropriate. Moreover, it relates the competences students can acquire through intergenerational digital service-learning to those found in European frameworks for competence development (Dig Comp). Besides, the guide offers guidance on introducing “tandem teaching” methods specifically in HEI to facilitate intergenerational learning on digital service-learning projects.

Availability of the guide

The Practical Guide to Intergenerational Digital Service-Learning targets at HEI educators and HE managers who are interested in the topic of Service-Learning with an intergenerational and digital component and want to introduce this new approach of Service-Learning into their organisations. The guide is available as an electronic source and open source in English, German, Spanish and Swedish. Link to website:

The IDOL-project as a framework of this guide

The project IDOL – **Intergenerational Digital Service-Learning** (2022-2024), co-funded by the ERASMUS+ Programme of the European Union, focuses on an innovative approach to service-learning. It extends service-learning with an intergenerational and digital component to tackle the multiple impacts of the COVID-19 pandemic resulting in intergenerational tensions and the shift to digital learning environments.



Structure of the Guide

1

INTRODCUTION

2

THEORETICAL FRAMEWORK: SERVICE-LEARNING WITH AN INTERGENERATIONAL AND DIGITAL COMPONENT

3

PEDAGOGICAL APPROACH OF INTERGENERATIONAL SERVICE-LEARNING

4

FROM SERVICE-LEARNING TO E-SERVICE-LEARNING

5

CO-TEACHING/TANDEM TEACHING AS PART OF SERVICE-LEARNING

6

CASE STUDIES ON INTERGENERATIONAL DIGITAL SERVICE-LEARNING



Further outputs of the IDOL-project:

PR2 (PROJECT RESULT 2): DIGITAL SERVICE-LEARNING TOOLKIT: The toolkit will provide practical guidance and tools for HEI educators wishing to incorporate digital service-learning activities into their teaching, with a focus on increasing their confidence in using digital tools. These tools will practically support HEI staff, students and older learners to implement a service-learning project online. This will address the Erasmus+ priority for supporting Digital Capabilities of HE sectors. The main target group of the toolkit are HEI educators, who wish to incorporate IDOL activities into their curricula.

PR3 (PROJECT RESULT 3): IDOL HACKATHON GUIDE: The hackathon guide is a document that introduces HEI lecturers and staff to the concept of a hackathon on intergenerational digital service-learning techniques & tools and guides them on how to facilitate digital service-learning projects for students and older learners. A hackathon is an activity focused on creative problem solving and can be carried out both virtually or in person. Although the goal is to help adult learners and younger students to solve a community problem by designing a creative solution, the educational benefit is evaluated by progress in the application of transversal knowledge and skills rather than by the quality of the solution itself.

02

THEORETICAL FRAMEWORK: SERVICE-LEARNING WITH AN INTERGENERATIONAL AND A DIGITAL COMPONENT

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Gutenberg-University Mainz)**





2.1. Service-Learning as a Pedagogical Approach


What is Service-Learning?

Higher education study programmes on both Bachelor's and Master's degree level have in recent years shifted their focus from mere theoretical knowledge to more practical knowledge and forms of application of theory (Baltes et al., 2007). By bridging the gap between theory and practice, applied forms of teaching and learning, have – in several disciplines – gained more importance in recent years (Resch & Fellner, 2022). For applied coursework to function well in higher education, new pedagogies, such as service-learning (Butin, 2010; Bringle et al., 2016) are required. Service-learning has been identified as one of these new and innovative pedagogies which connects theoretical and practical learning by allowing students to develop or participate in an organised service in the community while simultaneously reflecting their learnings in a structured manner (Furco, 2009). These pedagogies support students in gaining practical experiences in their discipline and in developing civic competences in parallel (Resch & Dima, 2021).

The evidence base for the usefulness of the service-learning approach as a didactic approach in higher education has grown in recent years (Aramburuzabala et al., 2019; Resch et al., 2022). Service-learning in the community can include services in schools, public institutions, businesses, or non-profit organisations. Community partners can therefore have academic, social, political, economic, or ecologic backgrounds. How service-learning is embedded in the respective higher education institution varies from country to

country, context to context, discipline to discipline and curriculum to curriculum, however, service-learning can only take place when it is embedded in a pedagogical setting. This implies that service-learning pedagogies vary and have different objectives and constraints for those involved (Felten & Clayton, 2011). The programme diversity in service-learning is broad: service-learning courses vary in their duration from at least one semester to more than one semester or established long-term programmes. They vary in the forms of students' reflection, which can be continuous, post- or pre-reflection before and after starting a service. In addition, we distinguish between different types of services: direct service-learning, indirect service-learning, research service-learning, and advocacy service-learning (Bringle et al., 2016). The concrete amount of student voice and the respective levels of responsibility differ as well. This makes it quite difficult to exactly define what service-learning is, however, we recommend the definition of Bringle, Hatcher, & McIntosh (2006):

“Service-learning is a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility.” (Bringle, Hatcher, & McIntosh, 2006, p. 12)



This definition shows the main elements of service-learning, which were chosen as inclusion criteria for the empirical study to follow (see chapter 6). Service-learning needs to be embedded in academic coursework (bearing credits), while in this course students need to take part in an organised service in the community as described above and reflect upon their experiences in their academic discipline. Compared to other courses, service-learning courses promote civic responsibility.

The essential elements of service-learning according to (Howard, 2003) are:



A service provided in the community, one that responds to a need that originates in the community.

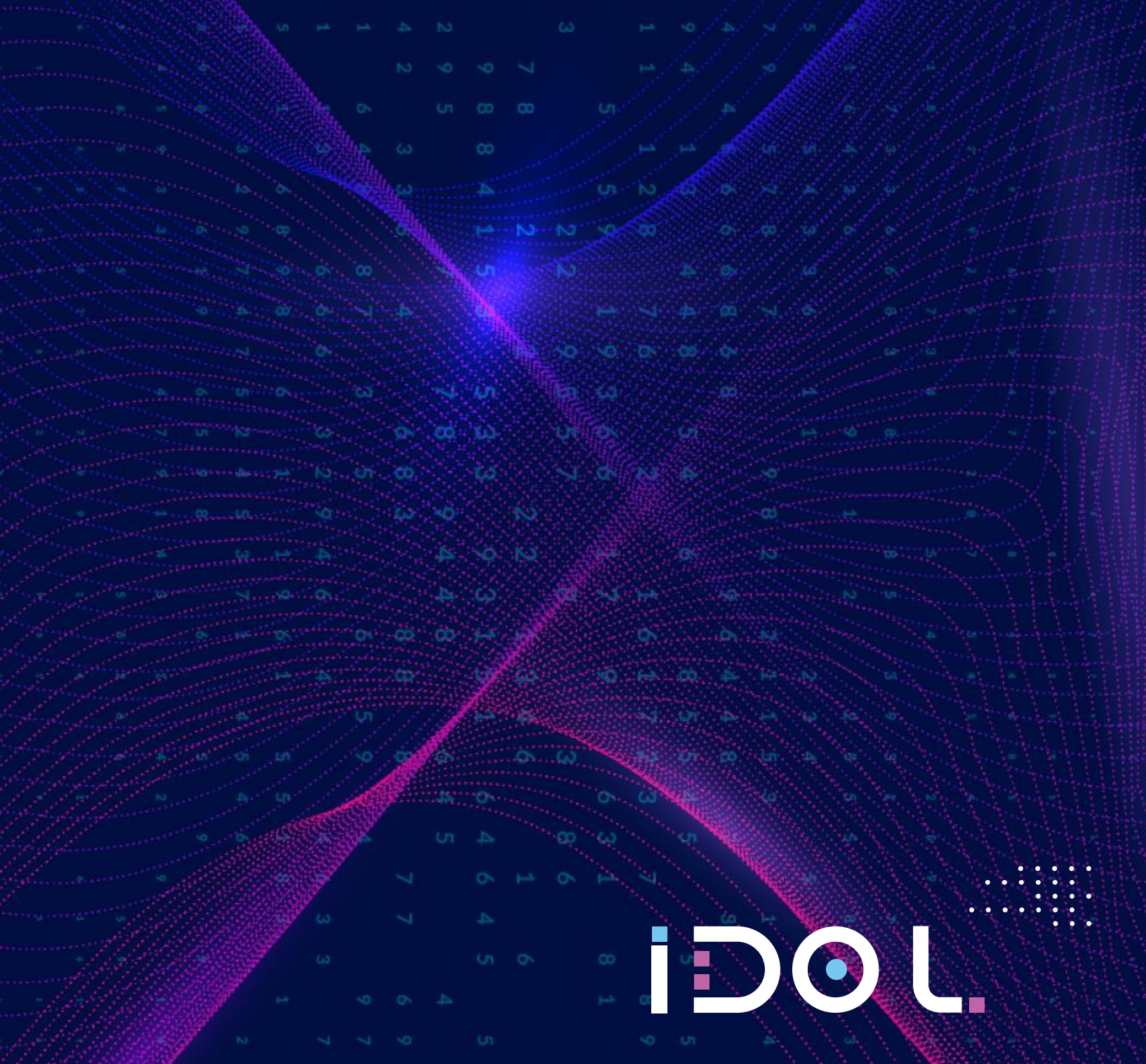


Students' academic learning is strengthened.



Students' commitment to civic participation, active democratic citizenship, and/or social responsibility is advanced.

Service-learning as a new teaching and learning approach has its origins in the Anglo-American context and that has finally gained more and more attention in European universities. It “connects theory and practice by allowing students to participate in a service that meets community needs and to reflect on the experience in class in order to gain a deeper understanding of the course content and an enhanced sense of civic engagement.” (Resch et al., 2020, p. 10)



The conceptual foundations of service-learning are:

- “Democracy as a way of life” and “learning through experience”: In this context, service-learning promotes the conception of democracy sharing the common intention to live together responsibly and with common democratic values.
- “Experimental Learning”: Through this form of learning, students gather experience with a

community of practice, link theory and practice, and develop related personal and social skills.

- “Social Learning”: Service-learning focuses on students’ engagement in social organisations and institutions that support living together in solidarity and benefit both the community and society. It “intends to support student’s personal growth, their social, professional and civic competences” (Resch et al., 2020, p. 16).

Service-learning has several components (Ash & Clayton, 2009), as shown in Figure 1 (below), as already mentioned it combines academic material, a relevant service in the community and critical reflection. Also, the main learning objectives for students are civic learning, academic learning and personal growth. The challenge for the teacher is to design a service-learning course, which contributes to delivering outcomes on all three levels: academic learning, civic learning, and personal growth at the same time (Felten & Clayton, 2011). The figure also adheres to the three main participant groups: students, faculty or educators, and community partners (Figure 1).

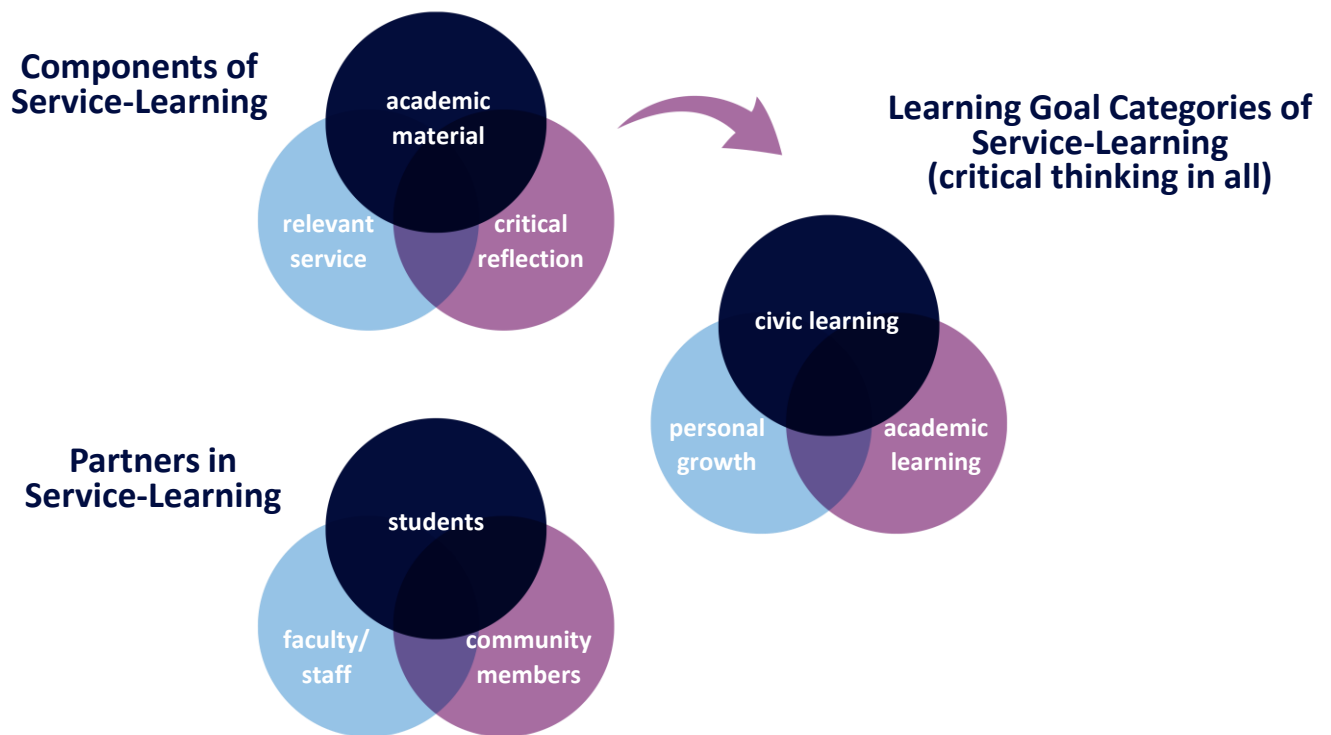


Figure 1. Conceptual Framework for Service-Learning
Source: Reprinted with permission from Ash and Clayton, 2009b.

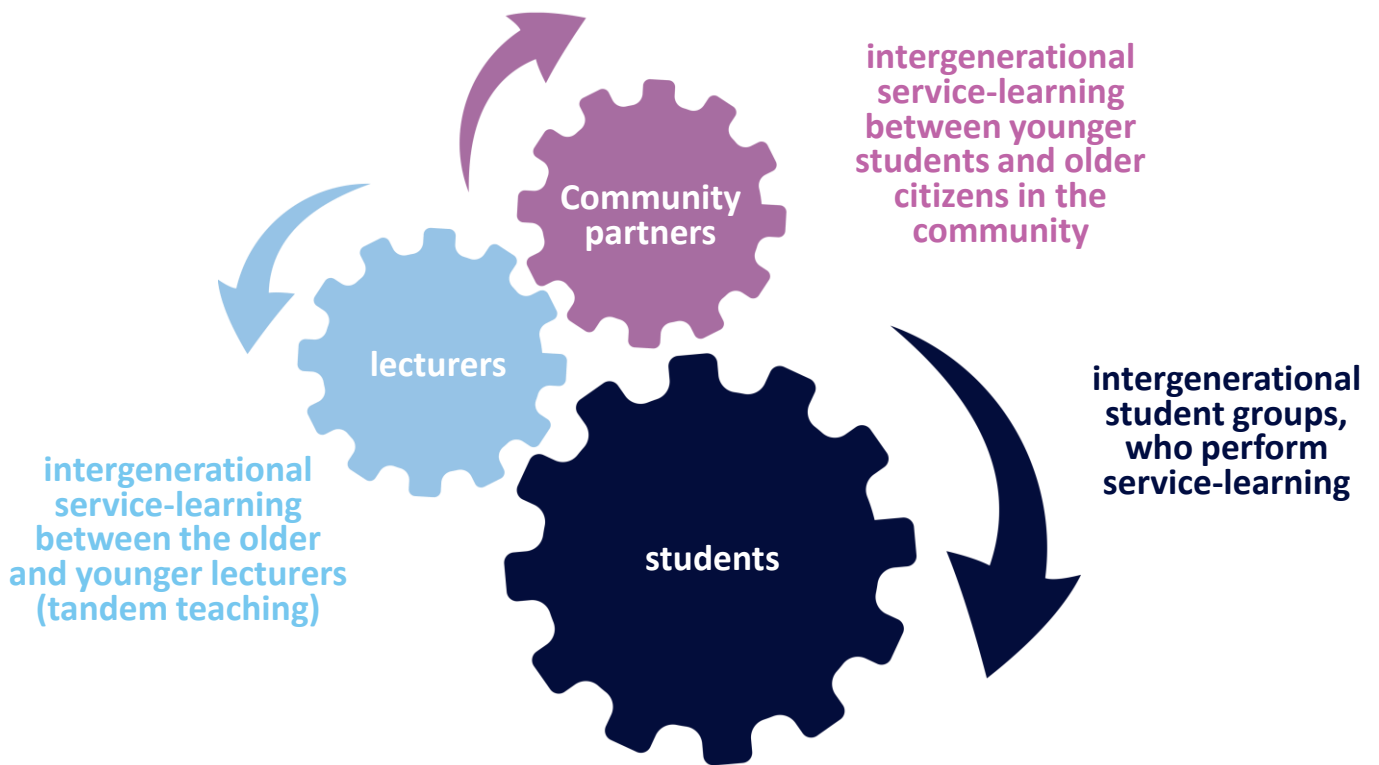
When taking a closer look at the participants of service-learning, we could ask, where to add an intergenerational component, as it is the main aim of the IDOL-project. First, service-learning could be intergenerational on the side of the involved students by generating intergenerational student groups, who perform service-learning together. Second, the intergenerational component could be added on the side of faculty or educators when (older) lecturers and (younger) lecturers work together in applied coursework (**tandem teaching**). Lastly, and this is the more common understanding of intergenerational service-learning, it is a dimension applied between students and community partners, in particular between younger students and older citizens in the community.

A generation is viewed as the entity of people with similar age and a similar orientation and view of

life. A generation shares lived experiences and the reflection and digestion of these experiences within a specific historical time, for example the emergence of the internet or the spread of the Spanish flu. Through participating in common crises, innovation, inventions, or historical events, generations become socio-historic units (Steffens, 2011). A generation can live through the same events, but can attach different meaning to the event, which means that historic events can be interpreted differently due to gender, socio-economic background, culture, education or political orientation, such as the meaning of September 11th (Fietze, 2003). We differentiate between intergenerational relationships within the family and outside the family. Within the IDOL-project, we will concentrate on intergenerational relationships outside the family.



Following this explanation, intergenerational service-learning can take three different forms:



Service-Learning can be described as a pedagogy that connects academic learning and a community service experience of students (Furco, 2009), and thus contains both ‘service’ and ‘learning’ (Resch & Schritteser, 2021). However, it can be quite challenging to find a balance between Service and learning. In some cases, students might be at the

community service for a few days or hours per week and spend more time on academic learning and reflection (**focus on learning**), while in other cases, they might spend months in the community and less time in the classroom (**focus on service**).

Benefits of Service-Learning

The benefits for students in service-learning have been well documented in recent studies and include:

- Learning and knowledge outside the classroom
- Fostering personal growth and development
- Acquiring practical competencies in a special field of applied knowledge
- Applying knowledge to real-life problems
- Fostering self-efficacy
- Reinforcing citizenship and civic engagement
- Building networks to social enterprises or community partners



Students can benefit from a service-learning experience, using it for their later professional life (**professional benefit**), e.g., practical experiences, or gaining access to a profession. They have the chance to widen their horizons by getting to know different ways of solving problems, perspectives and life-worlds, and experiencing new roles (**personal benefit**). Personal growth refers to developing personal values and attitudes towards diverse population groups in the community (Bringle et al., 2016). In addition, students gain social networks by generating contacts with professionals in their field and by building networks and relationships (**social benefit**). Most importantly, service-learning promotes civic engagement, which may remain a component of interest for a longer time in a student's life trajectory (**social benefit**). Students can make an impact, be part of direct democracy, make a change in a community setting and contribute to

social responsibility in society (Schober et al., 2016). Civic learning in service-learning refers to gaining experience in social responsibility, for example by connecting to an association for the disabled or migrant students in the community.

However, community partners also benefit from service-learning by having a need of the community solved, by experiencing organisational development through the questions and inputs from external students and educators, and by identifying potential employees from students' groups. The university benefits from service-learning by strengthening the transfer of knowledge into the community, by fostering the social responsibility of universities, by having the chance and resources to do community-based research, and by creating new knowledge in the context of application, depending on the discipline.



Phases of Service-Learning

Teaching in higher education is a responsibility with many facets. Teachers who decide to teach with the service-learning approach must balance institutional rules with personal interests and basic regulations of curricula (Resch & Dima, 2021). However, teachers play a central role in service-learning when they decide to offer this kind of

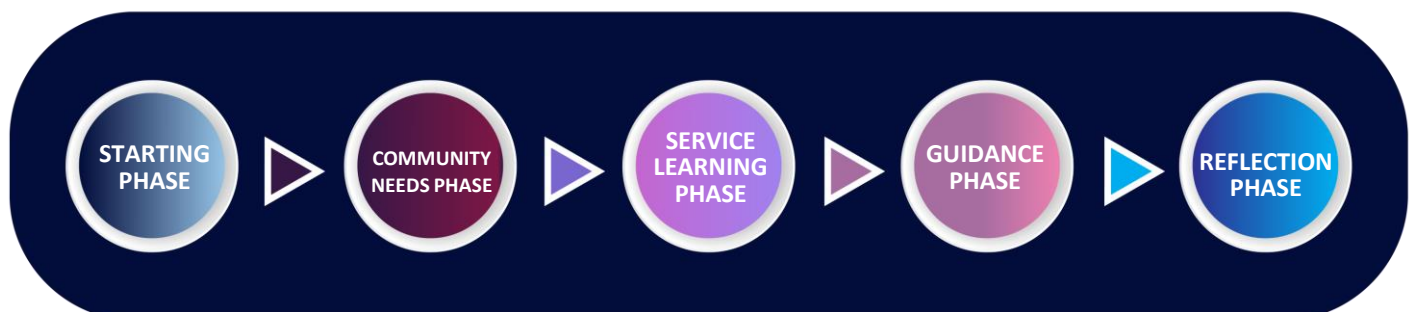
applied coursework. Through incorporating service-learning projects within their teaching, they enrich their courses with multiple benefits for students, faculty, community partners and finally also for their own professional development (Aguiniga & Bowers, 2019).

As shown in the Figure below (Figure 2), service-learning takes place in different phases:

- 1 Starting Phase
- 2 Community Needs Phase,
- 3 Service-Learning Phase,
- 4 Guidance Phase and a
- 5 Reflection Phase (Resch & Knapp, 2020).

These phases are built on one another in their chronological sequence and end with a final reflection of the whole process.

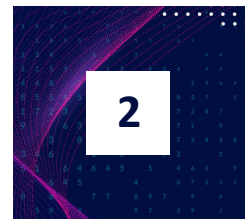
Resch & Knapp, 2020





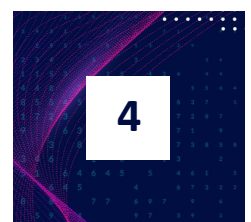
In the (1) **STARTING PHASE**, the teacher designs the service-learning course, registers and involves students in the course and introduces the methodology. Students start imagining investigating real-life problems in an actual community, institution, business, or group, imagining strategies that they can use to solve or minimise problems there. In the starting phase, teachers identify the interests, competencies, and motivations of their students in relation to the course and identify the needs and resources of the community partner. Teachers in this phase must be willing to actively involve students in their coursework (Furco, 2003), to create more authentic learning situations for students, and to collaborate with community partners. Optionally, they formalise the cooperation between the university and the community partner in a cooperation agreement in either verbal or written form.

In the (2) **COMMUNITY NEEDS PHASE**, teachers must be able to identify a relevant problem that is both socially and personally significant for students and community partners (Reinders, 2016). To collect the relevant information and identify the needs and resources in the community, it is recommended to use empirical research methods, which target listening and understanding first-hand experiences in the community. Some of these methods may include participant observation or focus group discussion, but also photo surveys or community mappings (Fetterman & Wandersman, 2005). The main aim is to understand the community needs.



In the (3) **SERVICE-LEARNING PHASE**, students actively take part in an organised service activity in the community for several weeks or months, based on the identified community need in phase 2, while at the same time documenting and reflecting upon their experiences in practice. In this phase, students typically work in small groups and spend time working in the community, institution, or group. This can be challenging in terms of time effort and communication.

In the (4) **GUIDANCE PHASE**, students still spend the majority of their time in the community and are in parallel guided by their teachers. Students experience the desired combination of theory (academic results) and practice (service) as well as all other aspects of service-learning, such as personal growth and increase in professional competence. The role of the teacher now changes, as teaching a Service-Learning course requires them to change their role from a traditional-instructive role to a more non-hierarchical one (Howard, 2003). These new roles can be divided in expert roles (teaching and instruction) and supporting roles (process managing, mediating, and guidance counselling) (Resch & Schritteser, 2021). The teacher accompanies and supports students in the development of their community services and helps them understand how the transfer between theoretical learning and practice can take place. Sometimes, entering real-life contexts can lead to feelings of disappointment or frustration on the students' side, which needs to be reflected in the course (Bates et al., 2009). Students in this phase oftentimes keep a learning diary, participate in regular group (reflection) meetings in which they can share their experiences and discuss what is happening, or have peer tutoring.



The (5) **REFLECTION PHASE** is an important part of service-learning, which supports and ensures the transfer and sustainability of the learning process at the end of the experience or semester (Resch & Knapp, 2020). The main aim is to place the experience of service-learning into a larger context that can generate new perspectives of how communities in fact work (Bingle et al., 2016). Besides reflection and evaluation, the recognition of the service effort is also a main aspect of this phase.

2.2. Intergenerational Service-Learning

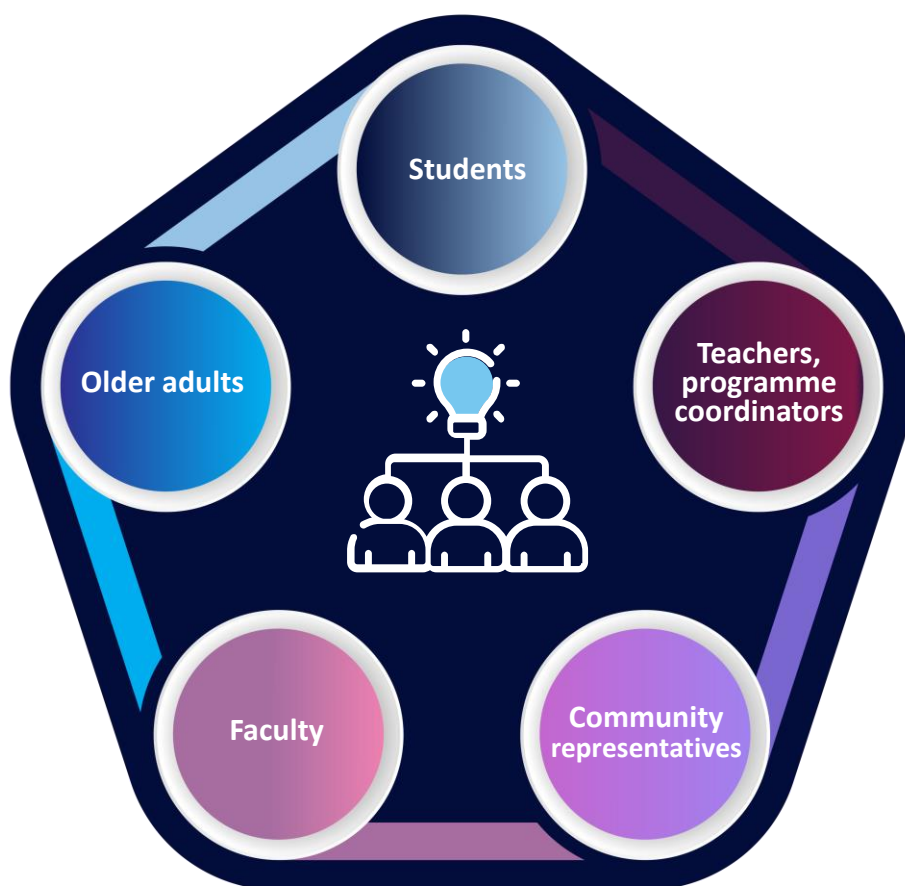
Conceptualising Intergenerational Service-Learning

Intergenerational service-learning is composed of two elements: service-learning (1) is deemed to be the underlying pedagogical approach that provides the didactic principles and is combined with an intergenerational component (2) that links students and older adults. Intergenerational service-learning pedagogy aims to connect individuals from different generations in meaningful relationships that are mutually productive and beneficial (Ayala et al., 2007). As the population ages and students often lack informal relationships with older family members (e.g., because they live geographically apart) (Ryan et al., 2012), intergenerational service-learning is becoming increasingly important in HE and contributes to intergenerational understanding, civic engagement, and social responsibility.

Intergenerational service-learning is typically part of Social Sciences and Health Studies, especially in gerontology and geriatrics education where age-related subjects are central parts of the curriculum

(Karasik, 2013; Roodin et al., 2013). The IDOL-project, however, aims to expand this disciplinary mapping of intergenerational service-learning by presenting intergenerational (digital) service-learning projects from different HEIs and disciplines across Europe (see Chapter 6). In this way, intergenerational service-learning is framed as a programme that cuts across disciplines and topics and includes a wide range of activities that target community needs.

Intergenerational service-learning involves different actors who ensure that the programmes can be realised. According to the meta-analysis by Roodin et al. (2013, p. 7) these actors are students, older adults, the community, faculty, and colleges/universities. In the IDOL project, we adopt this mapping and refine the actors' positions as follows:



In intergenerational service-learning programmes, students, teachers, and programme coordinators of study courses are directly involved in the preparation and planning of the service-learning course. Older adults can take on the role of recipients of service from young students or providers of service to others (Roodin et al., 2013, p. 20).

They can be community partners (e.g., elderly residents in a housing community), older students enrolled in a study programme or teachers who are part of a tandem of two persons from different generations offering a service-learning course. Community representatives are people holding a position of responsibility in a community (e.g., the manager of a housing community). Faculty are represented by study programme directors or HE managers, who ensure that service-learning courses are embedded in the curriculum and offered at HEIs.

Particular attention is to be paid to the role of older adults in intergenerational service-learning. Hegeman et al. (2010) draw a basic distinction between intergenerational service-learning programmes that provide service **to** older adults versus younger students who work together **with** older adults in service activities. This difference reflects how older adults are perceived by other actors of the service-learning course, e.g., as being active or passive participants. Collaborating with older adults in service-learning activities is becoming a more widespread model in the field, with students and older adults engaging in meaningful intergenerational activities together (Bartlett et al., 2022; Moinolmolki & Broughton, 2020).

The diversity of older people must also be considered when carrying out service activities. It can vary in terms of their social background (e.g., low income vs. high income, rural vs. urban area) and whether they are still in an active and healthy condition or vulnerable or disabled physically or cognitively and need additional support.

Research on Intergenerational Service-Learning

Studies on intergenerational service-learning highlight the various positive outcomes and experiences of participants. They coincide in the findings that intergenerational service-learning programmes promote intergenerational understanding and intergenerational connectedness between younger students and older adults. When students and adults create personal and meaningful relationships during intergenerational activities, both sides can benefit. Students can overcome negative stereotypes about age and older people, while older people learn about the lives of young people. Elders share their life stories, which can help guide students, and students likewise gain an understanding of the significance of important events in the lives of older people (Moinolmolki & Broughton, 2020; Underwood & Dorfman, 2006; Yoelin, 2021).



Intergenerational service-learning points to the valuable benefits of older adults to society and emphasises that everybody can contribute in meaningful ways (Sweetland et al., 2017). To evaluate service-learning programs there are various scales that can be used. For example, there is the AIDS Caregiver Scale, the Community Service Attitudes Scale, and the Civic Attitudes Scale. However, Roodin sees a difficulty in measuring already existing basic attitudes, which are given by the willingness to engage socially and are difficult to measure (Roodin et al., 2013, p. 6 f.). Research on beneficial outcomes of intergenerational service-learning for students is well advanced (Astin et al., 2000). Students taking part in intergenerational service-learning increase their knowledge of aging (Dorfman et al., 2003) and their confidence in their abilities to communicate with elders (Roodin et al., 2013). Intergenerational service-learning pedagogy can be an effective strategy to reduce ageism, a term referring to negative stereotypes and prejudices that often lead to the discrimination of older adults (Gardner & Alegre, 2019). The reduction of stereotypes in this case is related to the development of skills, including a better understanding of life and problems of older adults, more expertise in geriatric issues, as well as increasing communication skills and empathy, which foster a positive attitude toward older adults and their own aging (Roodin et al., 2013). Through a combination of education (i.e., courses about aging) and constructive intergenerational contacts, positive impacts on students' attitudes toward aging and aging-related issues can be stimulated (Yoelin, 2021). The benefits for students include a positive sense of personal growth and self-esteem (Ames & Diepstra, 2006), increased empathy and maturity, positive attitudes toward civic engagement, democratic content and social responsibility (Roodin et al., 2013), decreased fear about their own aging (Dorfman et al., 2004), and an enhanced interest in aging-related careers (Lun, 2010). On an academic level of development, students are reported to be more proficient in course content, they perform better, and are more likely to graduate from college. Generally speaking, most

studies report positive student responses to intergenerational service-learning opportunities (Roodin et al., 2013).

While the outcomes of intergenerational service-learning for students have been widely examined, there is less research on the outcomes of intergenerational service-learning for older adults, teachers/instructors, HE faculty and the community (Roodin et al., 2013). Older adults' perspectives on service-learning experiences with young people show the importance of personal interactions with a regular visitor, the relevance of reciprocal relationships that promote intergenerational understanding, and the sharing of life stories that support elders' feeling of self-worth (Underwood & Dorfman, 2006). Even when the focus of the service-learning project is not reminiscing life stories, opportunities for sharing life experiences seem to naturally come about through the dialogue between students and elders and thus have a positive impact on older adults' well-being (Moinolmolki & Broughton, 2020). Positive outcomes on elders' physical and mental health, increased feelings of companionship and decreased feelings of isolation are also reported in research on older adults' service-learning experiences (Roodin et al., 2013; Zuccherro, 2010).



Generativity as the feeling of being connected and responsible for the investment of the next generation can be fostered through meaningful intergenerational interactions and results in a better and more positive understanding of youth by older participants (Moinolmolki & Broughton, 2020). Service-Learning programmes are of particular value for elders living in rural areas since these regions often lack health and human services and many students are unfamiliar with rural communities and the needs of rural elders. Recommendations for improving intergenerational service-learning concern that elders would profit when they are informed about the goals, features, and expectations of the service-learning activity before the project starts. Additionally, the time-limited nature of service-learning activities needs to be stressed to prevent any negative effects of termination issues (Underwood & Dorfman, 2006).

Research on HE teachers' experiences in intergenerational service-learning courses focuses primarily on instructional facilitation and how to refine intergenerational service-learning courses. One aspect of successful service-learning involves a partnership among teachers, students, faculty, and community sites. A lack of well-developed communication between all actors can lead to disorganisation within the course and negatively affect students' learning (Hahn et al., 2020). Developing intergenerational service-learning projects requires time for planning (at least one semester in advance), building alliances with community stakeholders, and creating commitments among faculty and students to support the endeavour. All partners need to maintain flexibility in adopting service-learning pedagogy, especially in the early stage of the project (Hegeman et al., 2010). Preparing students well is important for them to be successful and confident in their service-learning activities. Many of them were often afraid and unprepared when working with older adults. Thus, teachers providing intergenerational service-learning courses need to consider the following preparations: Practical information about the service site, knowledge about age-related issues (e.g., health concerns, cognitive impairments), and instructions on how to approach and interact with older adults. In addition, teachers must ensure that students are aware of formal requirements, including the rules and regulations for both the course and the service-learning sites (Hahn et al., 2020). A key component for harvesting the learning in service-learning are reflection activities in which students link their service experiences to course content and the course learning objectives. Reflection activities are of value in intergenerational service-learning

courses as students become aware of their prerequisites about aging and their previous experiences with older people, which may influence their work with them. While journaling and discussions are the most common forms of reflection, there are also several alternative forms of reflection, such as reflection essays, student presentations, creative projects, and general reflection questions (Karasik, 2013). These different reflection activities can foster students' critical thinking skills which are vital to prepare students to be proactive, creative, and active members of their community (Hahn et al., 2020, p. 152).

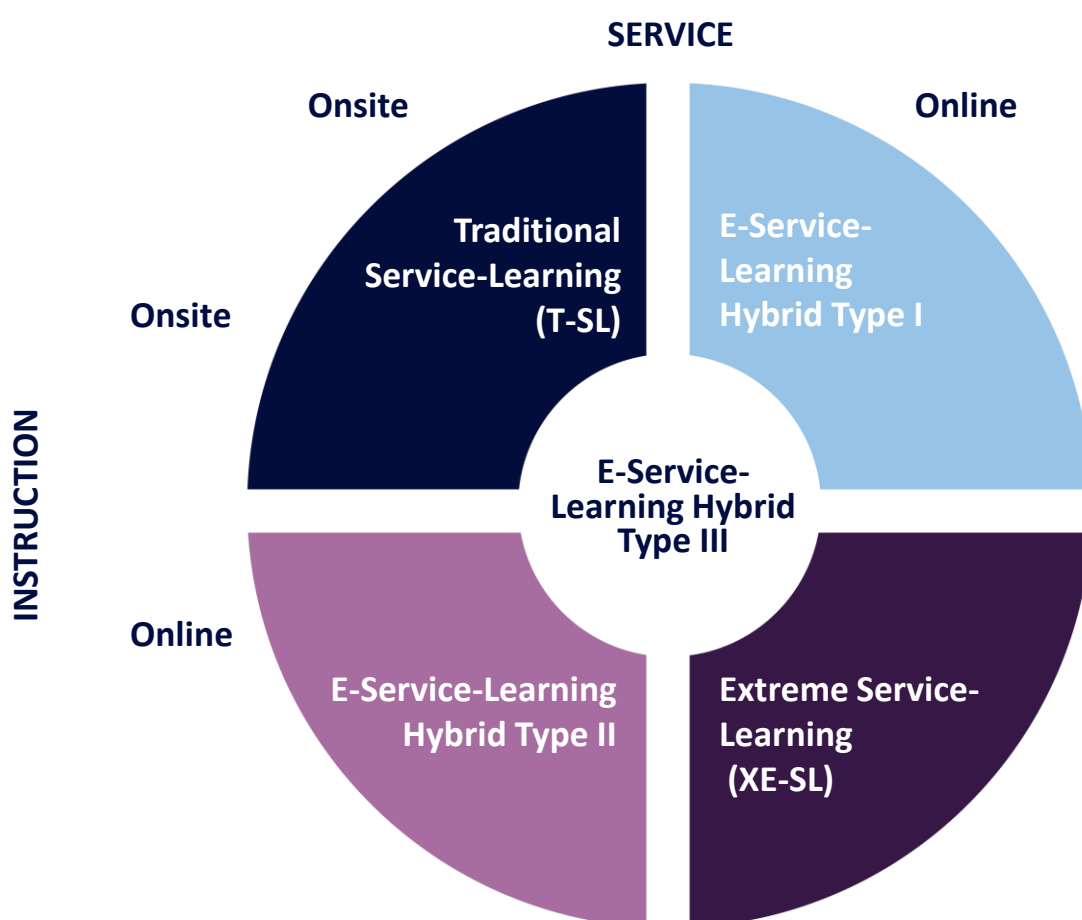
In the idol project, we focus on the perspective of students, teachers, and programme coordinators in the context of intergenerational (digital) service-learning.



2.3. Adding a Digital Component to Service-Learning

Digital Service-Learning (DSL) is a practical online learning approach involving the interaction and use of technology by learners in solving or meeting the needs of society through a conscious reflection on actions such that society benefits from its innovation. This type of learning as reported by researchers comes with certain challenges and enormous benefits or opportunities. Digital service-learning as posited by Albanesi et al. (2020) allows for unrestrained access and opportunity to learn in terms of one's geographic location due to its e-service feature and can be implemented and applied in different course models. Also, there is no restriction and discrimination against sexes, race etc. All categories of persons can enrol in this type of learning. This allows for shared knowledge and expertise among students. DSL exposes students to 'real world' situations offering them opportunities to learn, engage in; through test and application, reflect on, and invent solutions. The act of service being rendered to society contributes to competence development and imbues in them a sense of responsibility and citizenship or patriotism.

Traditionally, service-learning activities take place without an online component (Waldner et al., 2012) – both the **learning** in class and the **service** are conducted onsite in the community. However, there are forms of e-service-learning with digital components. We differentiate between these types: In the **Type I. e-service-learning hybrid**, the instruction component between the lecturer and the students takes place online, and the service part onsite, e.g., in a school. The **Type II. e-service-learning hybrid** is the opposite of Type I., with the instruction part taking place onsite at the university, and the service part completed online. The **Type III, the blended e-service-learning hybrid** is designed as a blended-learning environment both in the classroom and the community (this is the small grey box in the middle of the graphic below), and, finally, **full e-service-learning** takes place entirely online.



Digital service-learning is not without challenges. It is extremely important to make sure DSL is properly planned and organized. Past studies have reported on the need for intense searches to be conducted regarding available service opportunities and partners, familiarity, and preparation on the part of teachers and students in terms of the technologies, software, and materials to be used in the teaching and learning process, and in identifying areas needing service. There is also the challenge of being able to meet the diverse expectations and needs of students from varied backgrounds. Nonetheless for a successful DSL implementation, educators and students must both be cognisant with, and have some experience with the teaching techniques and e-learning respectively. Teachers must provide clarity on the resources such as the software application to be used, whilst ensuring that they meet the needs of students, and the capacities and skills of community partners and students should have been evaluated. Furthermore, excellent project management skills and collaboration with organisations is required. The texts also posited on the need for prior training for all parties involved in the digital service-learning and “coordinating

technology options with the community partner; drafting contracts and memorandums of understanding for students and community partners; scheduling pre-set meeting times to enhance communication; and implementing strategies to facilitate group interaction (e.g., creating team spaces on the course management system)” (McGorry et.al., 2012, p.145)

2.4. Intergenerational digital service-learning and European competence frameworks (DigComp, EntreComp)



In this chapter, intergenerational digital service-learning is linked to the European competence frameworks DigComp and EntreComp.

Link intergenerational digital service-learning to DigComp

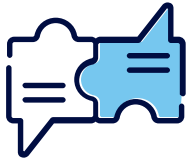
The European Framework of Digital Competence for Citizens (DigComp 2.2) introduces digital competence as one of the key competences of lifelong learning. The framework aims to highlight the importance of digital competence for learning and participation in society through technology and to bridge the gaps in the process of digital transformation. DigComp 2.2 consists of 5 competence areas and 21 competences relevant to student learning in HE. The competence framework can be used to help guide the definition of learning objectives or the preparation of learning content

and is thus well applicable for HE lecturers.

In the following table, the five most important competences from DigComp 2.2 have been selected that are relevant for intergenerational digital service-learning. Students enhance their digital competences by participating in intergenerational digital service-learning activities. The left column contains the competence descriptions presented in DigComp 2.2. The right column shows how intergenerational digital service-learning contributes to the development of the specific competence area.

COMPETENCE DESCRIPTION	RELEVANCE TO IDOL COMPETENCES
 <p>Collaborating through digital technologies</p> <p>To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of data, resources, and knowledge</p>	<p>Today's digital communication offers new opportunities to participate in society and share knowledge while networking with people around the world, especially in the context of academic learning. Developing this competence supports HE lecturers and students to engage in digital service-learning projects, use appropriate tools to create content and develop a collaborative project.</p>
 <p>Engaging in citizenship through digital technologies</p> <p>Digital citizenship refers to the responsible use of technology by anyone who uses computers, the Internet and digital devices to engage with society on any level.</p>	<p>Planning an intergenerational digital service-learning project requires finding out what issues are currently present in society, what the needs of community partners are and whether issues have been pushed to the background that are nevertheless important. Diverse digital platforms offer various ways to get involved in regional, local or global activities. Developing this competence can be very helpful in identifying the needs and issues of a community partner and what digital service-learning activities might be appropriate to address them.</p>

COMPETENCE DESCRIPTION



Interacting through digital technologies

To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context



Managing data, information and digital content

To organise, store and retrieve data, information, and content in digital environments; to organise and process them in a structured environment



Identify digital competence gaps

To understand where one's own digital competence needs to be improved or updated; to be able to support others with their digital competence development; to seek opportunities for self-development and to keep up-to-date with the digital evolution

RELEVANCE TO IDOL COMPETENCES

Students participating in intergenerational digital service-learning courses interact by using digital devices and applications. In doing so, they learn how to communicate, present and handle content through digital communication in an appropriate way. They learn how to use different media formats and adapt diverse communication strategies.




Working in an intergenerational digital service-learning project can be challenging when it comes to storing important files such as content or private/internal data. Developing this competence helps lecturers and students find ways to store these files and make them accessible to project participants to ensure collaboration.

Students and lecturers participating in an intergenerational digital service-learning project might be confronted with gaps in digital competence, either in themselves or within the generations they work with. Developing this competence can help to reflect on oneself or others to identify gaps, integrate (previous) knowledge and know how to help others improve their digital competence.

Link intergenerational digital service-learning to EntreComp

The Entrepreneurship Competence Framework (EntreComp) offers a tool to improve the entrepreneurial capacity of European organizations and entrepreneurial competences of European citizens. The framework aims to build consensus on a common understanding of entrepreneurial competence by defining 3 competence areas and a list of 15 competences to which educational initiatives can refer.

EntreComp competences can be fostered through intergenerational digital service-learning. In the following table, the five most important competences from EntreComp have been selected that are relevant for intergenerational digital service-learning. The left column contains the competence descriptions presented in EntreComp. The right column shows how intergenerational digital service-learning contributes to the development of the specific competence area.

COMPETENCE DESCRIPTION	RELEVANCE TO IDOL COMPETENCES
 <p>Creativity</p> <p>To develop creative and purposeful ideas</p>	<p>Intergenerational digital service-learning projects give students and lecturers the opportunity to creatively use resources from academic and practical fields to facilitate the development of new ideas and approaches that meet the needs of society.</p>
 <p>Spotting opportunities</p> <p>To use imagination and abilities to identify opportunities for creating value</p>	<p>Digital service-learning projects require students to know how to explore the social environment for their service activities, how to identify and address communities' needs and how to participate in opportunities for social participation.</p>
 <p>Ethical and sustainable thinking</p> <p>To assess the consequences and impact of ideas, opportunities, and actions</p>	<p>Participating in society in the context of HEI and community partners aims to find sustainable solutions to meet the community's needs, based on theoretical and practical knowledge. This requires reflecting on every step in the planning process and also about the impact of one's own actions in society.</p>

COMPETENCE DESCRIPTION



Coping with uncertainty, ambiguity, and risk

To make decisions dealing with uncertainty, ambiguity, and risk

RELEVANCE TO IDOL COMPETENCES

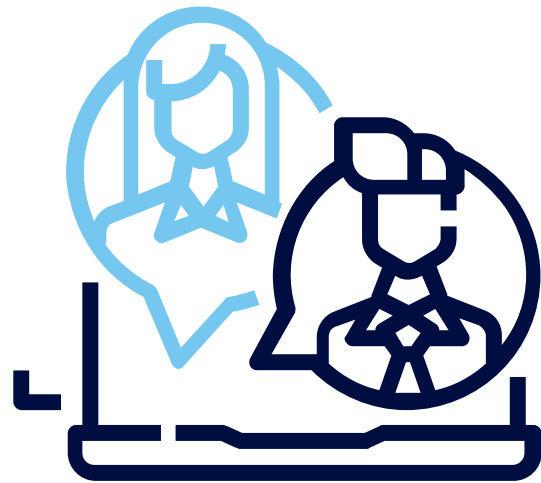
The COVID-19 pandemic posed a challenge for lecturers, students and older generations. Uncertain situations are part of daily life, especially when working with other people, in a digital context or as part of civic activities. However, this should not stop people from engaging in uncertain situations. Students, lecturers and community partners should be able to make decisions at short notice and deal with unexpected changes.



Learning through experience

To learn by doing

Learning in an intergenerational context is a great opportunity for both generations to learn from each other, especially if both generations are open to reflective learning and accept different points of view and generational differences and if they are willing to share their experiences (e.g., of success and failure).



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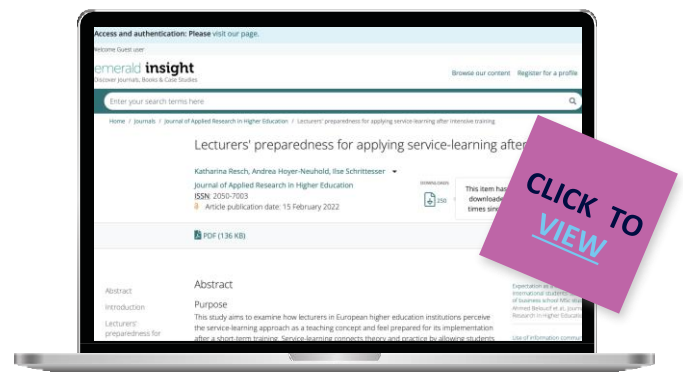
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03

PEDAGOGICAL APPROACH OF INTERGENERATIONAL SERVICE-LEARNING

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Part three of the IDOL-project is to discuss the pedagogical value of intergenerational service-learning in higher education. For this topic, we asked two main questions: First, how intergenerational service-learning contributes to intergenerational learning (3.1) and second, how intergenerational service-learning can be integrated into higher education (3.2).



3.1. Intergenerational Learning

When we discuss the first question, it is significant to observe the ways in which people of different generations learn together. Intergenerational learning is an informal learning process, a transmission of knowledge, experiences, perspectives, habits and attitudes between two or more individuals from different generations (Franz et al., 2009, p. 26; Stephan, 2021, p. 442). Because learning and development is socially and culturally bound, it is important to interact with people of other generations because each generation is unique and has their own experiences, perspectives, knowledge, and habits. Consequently, it is a way to create a deeper understanding of a topic, concept, or aspect of culture (Schmidt-Hertha, 2014, p. 145; Stephan, 2021, p. 441 f.).

Lüscher and Liegle's concept of "generational learning" can be seen as a pioneer of the concept of intergenerational learning. They use this term to refer to "all forms of learning for which the reference to age or generational affiliation is relevant as an age difference or age equality and which are significant for the transmission and acquisition of culture and for the constitution of the individual." (Liegle & Lüscher, 2011, p. 39). Based on a pedagogical concept of generations and its implied understanding of learning processes, they talk about a bidirectional learning process. The transmission and acquisition of culture and the offer of learning opportunities for the (self-)constitution of the individual as forms of generational learning are all understood as lifelong challenges (Liegle & Lüscher, 2011, p. 52 f.). It is interesting that their approach of acquisition (which Franz et al. 2009 described precisely) in which the learned knowledge is processed and changed through self-critical examination. In that way, future generations transform implicitly transmitted practices, skills, knowledge, and values of the previous generation and make them their own (Franz et al., 2009, p. 32).

Several positive effects of intergenerational learning have been identified, both at the individual and societal levels: first, it helps individuals examine their own knowledge and beliefs and understand

the difference between them and other generations. Furthermore, there will be an improved transfer of knowledge, skills, attitudes, habits and traditions, and healthier and closer relationships between different generations. However, the individual is not only strengthened on a personal level, he or she is also strengthened in his or her collective identity formation, embedded in social cohesion. For this reason, intergenerational learning also has the increased potential for social change and understanding of global issues (Schmidt-Hertha, 2014, p. 145 f.; Stephan, 2021, p. 441 f.).

Due to demographic change, the individualisation and pluralisation processes of life cycles, and changes in family forms, the transmission between different generations is becoming less self-evident, and less natural. There is a growing concern that the natural form of intergenerational learning (in families) may be lost soon, since families live together in multigenerational homes to a lesser extent as they did in former times, which is why it is essential to explicitly support this nonformal kind of learning. Extensive spaces have the potential to enable intergenerational encounters and intergenerational learning in an informal way (e.g., alongside other activities like cooking). While it acts as a mechanism for the reciprocal transmission of knowledge between youth and adults, it compensates the decreasing contact between the generations (Franz et al., 2009, p. 43). Modernisation processes in society have led to knowledge becoming increasingly differentiated and having a shorter half-life. Against this background, the concept of lifelong learning has been helpful. Knowledge does not necessarily transfer from the older to the younger generation. The different generations have to learn with, from and about each other in order to master complex societal challenges together (Sorgalla, 2015, p. 4).



Theory of Intergenerational Learning

In recent years, intergenerational learning has become a major topic in research. But many researchers still miss a common theoretical framing and understanding of intergenerational learning (Schmidt-Hertha, 2014, p. 145). For this reason, Franz et al. (2009) combined different understandings of generation with the conceptual approaches of Meese (2005), and Siebert & Seidel (1990) to structures/forms of intergenerational learning. For this, they discussed the dimensions of intergenerational learning.

CONCEPT OF GENERATION

There are three different concepts of generations: a genealogical, pedagogical and socio-historical understanding:

- **Genealogical concept of generation**
On a micro-social and genealogical perspective generations are connected through families. Since generation is therefore based on the degree of relatedness, it is often the case that one person has multiple roles (Franz et al., 2009, p. 26; Sorgalla, 2015, p. 2).
- **Pedagogical concept of generation**
In a dynamic and pedagogical perspective generations are understood as connected through learning processes in which generations assume the roles as teachers and learners, depending on knowledge and experience (Franz et al., 2009, p. 27; Sorgalla, 2015, p. 3).
- **Historical-sociological concept of generation**
Within the socio-historical concept of generation the focus lies on historical or social events which groups individuals because of the shared experiences. They often share similar attitudes and values (Franz et al., 2009, p. 27 f.; Sorgalla, 2015, p. 2).

INTERGENERATIONAL LEARNING-TYPES

The learning process between generations itself can take **THREE FORMS**:

- **Learning from each other**

First, it is possible that generations learn from each other. This approach highlights the fact that one generation informs and supports another generation. This learning type is the natural form of learning in a genealogical generational relationship, in which usually the younger generation learns from the older generation. A typical example is learning in mentoring projects in which an experienced person supports another person in his or her personal or professional development (Franz et al., 2009, p. 38 f.; Franz & Scheunpflug, 2016, p. 28; Meese, 2005, p. 39).

- **Learning with each other**

Another form of intergenerational learning is learning with each other, where the focus is on shared learning activities in which different generations work together on a topic. The topic is developed and elaborated together by the participants, therefore no generation has an expert status (Franz et al., 2009, p. 39 f.; Franz & Scheunpflug, 2016, p. 28; Meese, 2005, p. 39).

- **Learning about each other**

Individuals can learn about each other if explicit historical experiences of different generations are included in the learning process. This learning approach is an original type of intergenerational learning because it is closely related to the oral history tradition's development. Learning about each other means focusing on the historical and biographical living conditions and experiences of another generation. For example, witnesses of contemporary events could be invited to describe their biographical experiences of a particular event, such as World War II (Franz et al., 2009, p. 40; Franz & Scheunpflug, 2016, p. 28; Meese, 2005, p. 39).

Dimensions of intergenerational learning

Franz et al. (2009) described the **dimensions of intergenerational learning** in a comprehensive table (Franz et al., 2009, p. 41) – which Franz & Scheunpflug translated from German to English.



	LEARNING FROM EACH OTHER	LEARNING WITH EACH OTHER	LEARNING ABOUT EACH OTHER
GENEALOGICAL CONCEPT	a)	b)	c)
PEDAGOGICAL CONCEPT	d)	e)	f)
HISTORICAL-SOCIOLOGICAL CONCEPT	g)	h)	i)

Table 1: Dimensions of intergenerational learning (Franz & Scheunpflug, 2016, p. 28)

GENEALOGICAL GENERATION CONCEPT¹ (Franz et al., 2009, p. 41; Franz & Scheunpflug, 2016, p. 29)

- This combination describes a common case of intergenerational learning in a genealogical generational relationship – like in families. Learning from each other means that one generation shares its knowledge, experience and skills with the other. Traditionally, the younger generation learns from the older, for example how to cook. But it's also possible the other way around, for example when grandchildren help their grandparents to deal with new media.
- Learning together: generations learn together on one topic, e.g., in associations that regularly offer "grandparent-grandchild weekends" with different thematic focuses
- Learning about each other: At school, for example, children get the task of asking their grandparents about a certain event.

PEDAGOGICAL CONCEPT OF GENERATIONS² (Franz et al., 2009, p. 42; Franz & Scheunpflug, 2016, p. 30)

- Learning from each other: for example, mentoring programs: An experienced person (mentor) provides his/her experience, knowledge, skills and abilities to an inexperienced person (mentee).
- Co-learning: two generations are grouped together to work on a particular topic, thus bringing together different learning habits, perspectives, and points of view.
- It's also a classic area of intergenerational learning when generations in a pedagogical way are learning about each other. A common example for this field is when older people act as contemporary witnesses and talk about their personal perspectives and experiences about historical events, such as World War II.

¹ The main target group are generations from a family perspective (children, parents and grandparents).

² Generations assume different roles in the learning process. One generation owns experiences and knowledge that is transmitted to another.



HISTORICAL-SOCIAL GENERATION CONCEPT³ (Franz et al., 2009, p. 42 f.)

- With the combination of the learning type "learning from each other" and the historical-social generation concept the relevant historical contexts are reflected in which generations are born.
- When generations (in a historical-social way) are learning with each other, the focus is on the characteristics of the different generation groups, which makes it possible to change perspectives.
- The learning form "learning about each other" and the historical concept of generation result in the classic work area of museum education. Therefore, visitors learn about different generations through formative objects (e.g., a piece of the Berlin Wall, records, CD players).

³ *The focus is on the historical significance of generations.*

3.2. Pedagogical Strategies of Intergenerational Service-Learning in Higher Education

The second question is how intergenerational service-learning can be integrated into higher education. Therefore, it is interesting to ask how intergenerational learning can be seen as a task of higher education and what didactic challenges and topics come with it. Published work on service-learning in higher education has highlighted the importance of using specific didactic strategies that influence the success of the course experience. These strategies are described by Roodin and his colleagues through the following elements (Roodin et al., 2013, p. 11 f.): For Roodin et al. (2013) it is of great importance to plan and prepare the service-learning course regarding problem definition, required resources, connection with community partners and goal setting. With the second step it is important to prepare and accompany the students before and during their activities through training and sharing experiences within the course. Furthermore, the staff of the institution and community partners should be sufficiently involved and meet regularly. Various opportunities should be created for students to process their experiences in different reflection spaces. On the one hand, it is important to relate these reflected experiences to the course content. On the other hand, personal attitudes, values and beliefs should be questioned in those reflections. Finally, for Roodin and his colleagues, it is also important to celebrate successes together. This can be done, for example, through a meeting of students and older adults or a media presentation. Finally,

future service-learning courses will benefit from ongoing assessment and documentation of project outcomes by all participants. Paying attention to these five core practices facilitates an exchange of different projects and makes the broad spectrum of service-learning activities more manageable (Roodin et al., 2013, p. 11 f.).



Didactic Core Principles of Intergenerational Learning

When planning intergenerational learning programmes for students, teachers and other educators should pay attention to some principles, which Schmidt-Hertha (2014) described that may guide the development of intergenerational learning programmes:

- **Learning more about one's own generation and other generations**

Firstly, intergenerational learning must address learning about one's own generation and about others. The interaction is driven by their specific generational background, their perspectives and attitudes and should be considered as an important part of learning.

- **Reciprocal and equal exchanges**

Secondly, it is important that all participants are involved as learners and teachers, that they meet without hierarchies and have equal opportunities to control the learning process– they “engage as equal partners in a bidirectional learning experience” (Stephan, 2021, p. 443).

- **Shared commitments between involved parties**

Thirdly, project-oriented learning and service-learning seem to be highly successful strategies of having positive results with intergenerational learning, because that way all partners are working toward a common goal or final product with commitment (Schmidt-Hertha, 2014, p. 150 f.; Stephan, 2021, p. 443).



FURTHER THOUGHTS ON THE BASIC DIDACTIC PRINCIPLES

For Stephan (2021, p. 453), an important motivating factor for participation in intergenerational learning is missing, which is why

she identifies relationship and bonding as a fourth principle. For Franz (2014, p. 90 f.), there are six principles that lead to generation-sensitive didactic action: she is oriented towards biography, social space, interaction, participation, action, and reflection of the people involved. Perhaps what is new here is the explicit attachment to reflection, which emphasizes the joint evaluation of individual and collective experiences of the intergenerational learning process. Thereby, differences that occur between generations will be discussed and stimulated to engage with new content, which will again initiate learning. Intergenerational learning is thus embedded in a joint action, a joint engagement and reflected through the course at the university.

Didactic Challenges and Topics of Intergenerational Learning

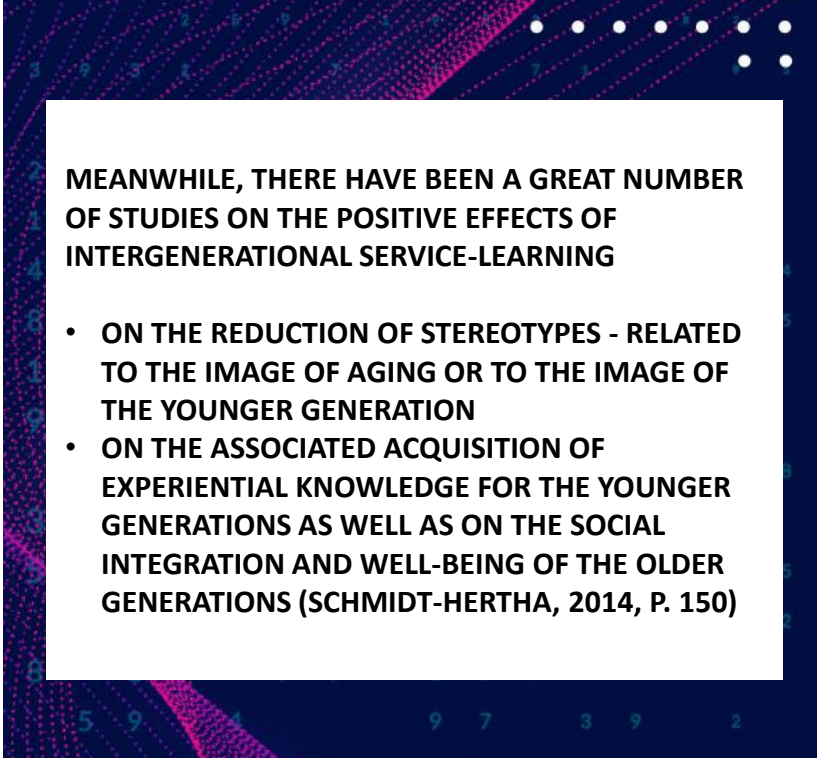
A didactic challenge can be to transfer informal and implicit learning processes, which have so far mainly taken place in the family, into a formal and intentional learning setting. For this purpose, the educational setting and the learning environment must be didactically designed in such a way that implicit processes can be explicitly reflected (Franz et al., 2009, p. 34 f.). In addition, generation-specific learning approaches and learning cultures must be considered in order to address all people

in the heterogeneous learning group (consisting of different generations, biographies and life situations) with their generation-specific learning approaches and different learning cultures. Learning behaviour, which is always time-historically and biographically charged, must also be considered in didactic planning (Franz et al., 2009, p. 35). To prepare intergenerational learning, it is especially important to stick to common interests.

Contribution of Intergenerational Service-Learning to Intergenerational Learning

According to some studies, project-based learning with a common goal is an appropriate vehicle for intergenerational learning because it reveals the meaning and impact of different generational perspectives and generation-shaping experiences. Frequently, such learning projects are described as intergenerational service-learning, even though (as Schmidt-Hertha 2014 criticizes) most activities are not based on reciprocity, since one generation supports another. For this reason, Schmidt-Hertha includes project-based learning and service-learning in his third principle for intergenerational learning, because it seems to be an important source of motivation for learners when learning processes are linked to engagement and higher-level goals (Schmidt-Hertha, 2014, p. 150 f.).

Meanwhile, there have been a great number of studies on the positive effects of intergenerational



MEANWHILE, THERE HAVE BEEN A GREAT NUMBER OF STUDIES ON THE POSITIVE EFFECTS OF INTERGENERATIONAL SERVICE-LEARNING

- **ON THE REDUCTION OF STEREOTYPES - RELATED TO THE IMAGE OF AGING OR TO THE IMAGE OF THE YOUNGER GENERATION**
- **ON THE ASSOCIATED ACQUISITION OF EXPERIENTIAL KNOWLEDGE FOR THE YOUNGER GENERATIONS AS WELL AS ON THE SOCIAL INTEGRATION AND WELL-BEING OF THE OLDER GENERATIONS (SCHMIDT-HERTHA, 2014, P. 150)**

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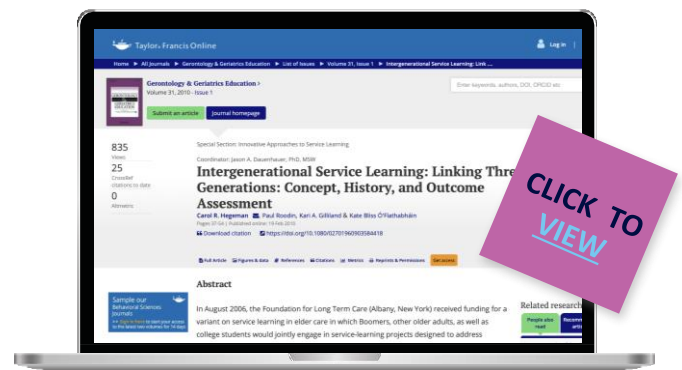
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04

FROM SERVICE-LEARNING TO E-SERVICE-LEARNING

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4.1. Why is this Transformation Important and Necessary?

Information and Communication Technology (ICT) has been pervasive in all areas of our lives for years. However, the closure of educational institutions due to the pandemic and the current limitations in face-to-face learning have made ICT (Information and Communication Technology) essential today. In the Adams et al. report (2017), 78 experts mapped out the five-year horizon for higher education institutions in relation to technology integration worldwide, and already recognized that online and blended learning would be inevitable in the future. A year later, the European Commission's Digital Education Action Plan (2018) highlighted the opportunities of digital transformation in education. But despite all this, UNESCO's Assistant Director-General for Education stated that we were not prepared for such a major disruption (UNESCO International Institute for Higher Education in Latin America and the Caribbean [IESALC], 2020). In this sense, the emergency plans designed by universities have followed similar guidelines (OECD, 2020): to train and advise the educational community to teach and learn virtually and to transfer teaching to the online modality. This transition requires ensuring quality and access to virtual teaching/learning, which is a challenge for all (Quintana, 2020). Academic institutions were hit hard by the introduction of the COVID-19 pandemic and, amidst the closures, colleges and universities were involved in an unprecedented shift to virtual teaching and learning and faced a sudden need to adapt to the new circumstances. One area that presented a particular challenge was the ability to engage in traditional service-learning practices (Schmidt, 2021).

Regarding the principles and characteristics of virtual service-learning, firstly, a humanistic and humanising digital mediation is recognised, in

which it is worth remembering that also in virtual educational processes, the purpose of education continues to be the full development of the human personality, as it appears in article 26 of the Universal Declaration of Human Rights of 1948. Therefore, there must be a clear awareness of the pedagogical intentionality that presides over technological integration. On the other hand, experience in virtual educational environments suggests that the inclusion of technologies in educational processes requires accompaniment. In this way, it is understood that service-learning (SL) is based on interactive dialogue between all the agents involved: between teachers, students, and social organisations (García-Gutiérrez & Ruiz-Corbella, 2022).



Higher education is a pedagogical environment that is essentially conducive to expand responsibility and broadening one's own rationality towards solving the problems of those communities and realities that are geographically more distant. Therefore, virtual e-service-learning projects are particularly suitable for promoting the idea of global citizenship (Larsen, 2014) and the need for a universal ethic that is concretized and connected to the principles, values, and rights set out in the Universal Declaration of Human Rights. SL stands as a powerful methodology for promoting civic engagement and human values (Gelmon et al., 2018) and can also be performed digitally. This has been demonstrated by digital SL work in times of pandemic (Aramburuzabala et al., 2021), showing the potential of digital environments when integrating online components into SL courses, in which three advantages stand

out from the literature: in terms of community partners, learners and learning objectives. First, if the service component is delivered online, e-service-learning projects can involve not only regional partners close to the university, but also organisations geographically dispersed across the country or even global community partners without the resources to travel. Second, by integrating online components into the instructional part of a SL project, geographically dispersed students or students who for whatever reason cannot attend lectures on campus can participate in SL courses. This is important for reasons of inclusion, as it allows non-traditional students, students with disabilities, or mental health issues to access SL courses (Waldner et al., 2012, p. 126).



4.2. Research on E-Service-Learning

Research into virtual SL in the context of higher education has a series of common objectives, based on what is known as digital pedagogy. Here we will refer to different lines that denote to current research and that will be completed with future research in this field.

Acquisition of values and generic skills

Much data collected in case studies already carried out with activities using this virtual methodology show positive results and show characteristics whose univocity can be transformed into a trend regarding the acquisition of values and skills.

This can be deduced from various research studies in which virtual SL yields numerous positive results on the impact on students' skills, as is the case of the study by Miró-Miró (2021), which shows how the digitisation of narratives in rural schools implements community actions, providing citizenship that is committed to reality. Following the line of interpersonal skills, Sparkman-Key's (2020) case study argues that the findings, after applying a case of virtual and international SL, entail an improvement in the development of students' interpersonal skills, namely: respect for self and others, authenticity, listening skills, non-verbal communication, cultural awareness, relationship building, and leadership. From Bringle's (2020) point of view, hybrid virtual SL can contribute to civic skills, attitudes, and values in the context of higher education, in addition to bringing learning communities closer together, opening dialogue and creating new learning platforms. For Paredes (2019), the practice of virtual SL can be considered as congruent scenarios for the acquisition and development of digital, social, and citizenship competences, increasing social sensitivity and civic engagement.

Furthermore, as stated by Ruiz-Corbella (2020), the results highlight the improvement of civic engagement and intercultural dialogue, while students indicate that it favours the development of their professional competences. Finally, in the study by Marcus et al. (2019) from the University of Malaya, students and teachers discuss what are the common social needs and the results show that the design of the learning environment is effective in promoting the development of these generic skills such as global citizenship, adaptability and teamwork.





Ubiquitous and mobile learning

There are two interrelated paths to SL from a technological perspective: ubiquitous learning and mobile learning. The former is referred to as an everyday learning environment through the integration of mobile devices and networks into everyday life, something that includes real-life experiences augmented with virtual information and that adapts to the learner and their environment (Kinshuk, 2012). Some of the characteristics of this vision are connectivity, portability and interconnectedness. While for UNESCO (Mobile Learning, 2021), mobile learning implies the use of mobile devices and is the condition for ubiquitous learning to exist. As research by Manghisch-Moyano and Mangisch-Spinelly (2020) demonstrates, mobile devices can support general educational objectives, development in the classroom itself and the possibilities of extending educational experiences beyond the classroom and enable non-formal or informal learning, as well as personalised learning.

Virtual mobility

Regarding the internationalisation component, the participation of students in these academic exchange processes is fundamental for their training. Therefore, the student will be able to carry out a stay in another place without the need to interrupt or abandon their daily responsibilities and without special time restrictions to carry it out (Ruiz Corbella & García Aretio, 2010). Considering García-Gutiérrez (2021), the experiences of virtual mobility show that learning by doing is possible while enjoying the benefits of international mobility and digital technologies. In this way, barriers are eliminated through the virtual world, resulting in a user experience in which interaction with others is essential. Just as it is described in Dapena et al. (2022) when they argue that their experience includes the evaluation of both competences and service satisfaction using different resources for virtual collaborative work. In the same vein, Harris (2017) states that exchanges provide important lessons in intercultural dialogue, both in real life and in virtual spaces. Remote activities allow the learner to develop cross-cultural insights and acquire knowledge and skills in problem-solving, as well as to understand and exercise the concept of informed global citizens.





ICT for the SDGs

ICTs, as Information and Communication Technologies, use established methodological frameworks and tools for the conception, design, implementation, monitoring, and impact evaluation of technological development interventions. They mostly involve participatory, community-centred approaches that promote appropriability, i.e., the acceptance, operationalisation, and long-term maintenance of technology for the promotion of the Sustainable Development Goals (SDGs). This is as Mikhailova (2021) notes in her study, concluding that sustainability management requires a constant improvement of the content of the educational curriculum for better decision-making, as well as providing a context in which to improve the

relationship between citizens and nature and to learn interdisciplinary knowledge such as a specific subject of study together with an improvement of human civic behaviour. The virtual mobility approach also constitutes another successful experience that virtual SL projects can deal with, given that intercultural and technological competences are acquired that are connected to the notion of global citizenship, a goal of the 2030 Agenda (García-Gutiérrez, 2022). Along the same lines, as stated by Plata and Moredó (2021) in their results, students who carry out virtual SL have a better understanding of the SDGs, collaborative and team learning, as well as a sense of civic responsibility.

4.3. Potential/Value of E-Service-Learning

From all the above, it can be understood, as Celi-Arévalo (2021) maintains, that the integration of students into the digital environment generates connections with new learning, strengthening their capacities, through digital interactions. The benefits of the technological tools and platforms of SL projects create collaborative environments, allowing the generation of communicative acts and incremental learning (Sandy & Franco, 2014). For all these reasons, each experience is constituted as an act of communication and each human relationship implies learning. Digital platforms and tools have become a means to improve the SL experience, strengthening exchange relationships with the community and forging a civic and social spirit. In this way, the approach to the incorporation of technologies in educational institutions not only constitutes a look at the needs of the educational content, but also the impact that is expected to be achieved in the community.

The findings contribute to the growing literature that is being developed on remote education in the context of a pandemic (Aramburuzabala et al., 2021; Plata & Moredo, 2021), where the relative importance of ICT as factors has been determined as motivators for meaningful learning, considering the debates on the limitations of traditional education in the information society.

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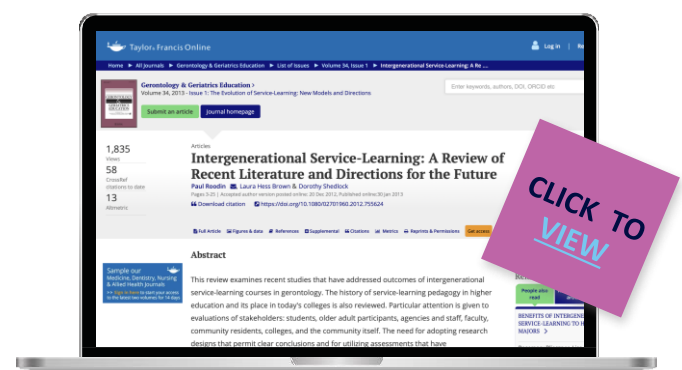
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05

CO-TEACHING & TANDEM-TEACHING AS PART OF SERVICE- LEARNING

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Co-Teaching & Tandem-Teaching

Collaborative work receives attention in higher education institutions mainly in research (Lock et al. 2016). This chapter will attempt to focus on collaborative teaching activities within higher education institutions and relate Co-/Tandem-Teaching to service-learning. Elements that favor the development of Co-/Tandem-Teaching, and show the benefits as well as challenges of collaboration within Co-/Tandem-Teaching are highlighted. Lock et al. (2016) use a qualitative research design to pick out the different traits that

are key to making co-teaching a success. Meanwhile, Ferguson and Wilson (2011) use information gained from a previously carried out Co-Teaching programme in Texas to display the value of collaboration within co-teaching. Rottach's report (2019) focuses on a conceptual example of Tandem-Teaching and provides initial results from the trial phase of an associated study. Crook and Friend (1995) provide a guideline for effective Co-Teaching projects with practical tips and recommendations under a critical point of view.

What is Co-/Tandem-Teaching?

Lock et al. (2016) speaks of the fact that Co-Teaching can be defined in many ways. Basically, Co-Teaching describes a partnership, involving two educators to teach the same group of students at the same time within a defined learning programme and time (Lock et al., 2016, p. 23 f.). It is known as one of the crucial techniques in responding to the diverse needs of students (Ferguson & Wilson, 2011; Kloo & Zigmond, 2008, p. 53). Service-Learning in the context of teaching in HEIs involves lecturers with a theoretical background as well as partners from the practical field which are participating in the teaching-learning process (see chapter 1). Tandem-Teaching in this context is defined as a format of collaborative teaching, in which one teacher from the professional practice area and one teacher from the university-internal area are simultaneously involved in the conception and implementation of the teaching activity. The joint presence in class enables the connection of theory and practice in teaching (Rottach, 2019; Kricke & Reich, 2016).

Different Types of Co-/Tandem-Teaching

Co-teaching can be performed in different combinations.

Lock et al. (2016) describes six types of teaching in addition to the general form of co-/tandem-teaching, based on Friend et al. (2010, p. 23 f.).





One option for Co-/Tandem-Teaching is the participation of **One teacher - One assistant** which means that one teacher has primary the instructional responsibility, while the other assists students. **Station teaching** describes a teaching format in which the course and the learning content/activities are divided into stations. Each teacher is responsible for a specific content and pass it on to the individual groups. **Parallel Teaching** differs from that. The teachers work together to plan the content of the lesson while the actual teaching takes place to the same time but to different groups. **Alternative Teaching** as

another alternative describes working with a large group while the other teacher teaches a smaller group to offer an additional support. In the teaching format **one observes, one teacher** describes the combination of one teacher gathering data of the learning process while the other teaches. Together they analyse the results. **Teaming** is described as both teachers are teaching and sharing the content of the course together. This might be the common definition of Co-Teaching regarding to the definitions in the section mentioned above.

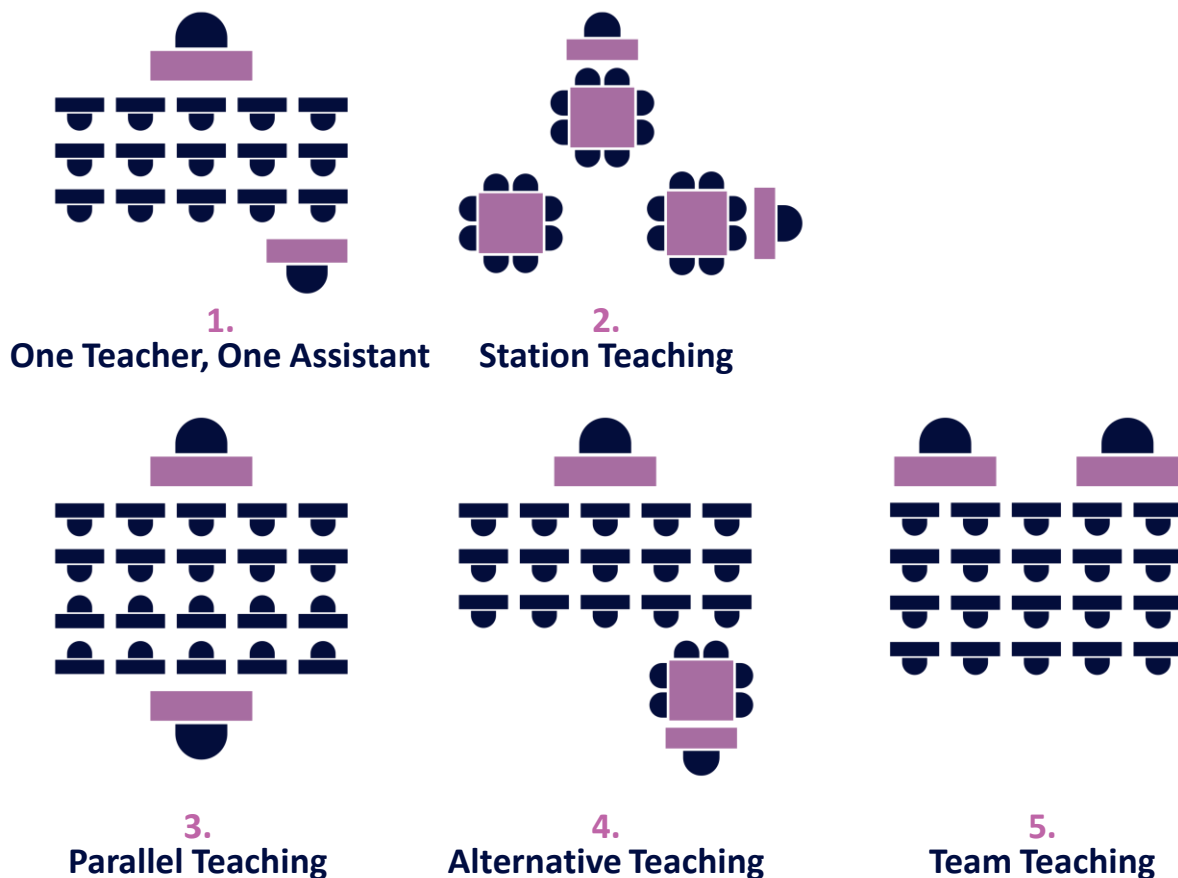


Fig. 1. Source: Adapted from Including Students with Special Needs: A practical Guide for Classroom Teachers (p.87), by M. Friend and W. Bursuck, 1996, Boston: Allyn & Bacon.

Benefits of Co-/Tandem-Teaching

Following previous studies, some benefits of Co-Teaching have emerged. One of the benefits often mentioned is that both teachers bring different experiences that can be aligned with the different learning needs of the learners. This contributes to diversity-aware teaching and adds a valuable learning experience to the class (Cook & Friend, 1995; Bauwens et al., 1989; Wals, 1992; Lock et al., 2016; Ferguson & Wilson, 2011). The supervision and consultation with the learners can be more intensive due to Co-Teaching, which favours learning as well (Ferguson & Wilson, 2011 p. 65), because students get the chance to get more involved in the learning process with two teachers and more instructions (Cook & Friend, 1995).


In this case, working in a Co-Teaching partnership, teacher can lead to new roads. When they are getting open to each other and looking out to

different perspectives, they get the chance to learn about different experiences and different teaching methods which will help to increase students interests and class participation (Lock et al., 2016; Gaytan, 2010; Yanamandram & Noble, 2005). While students benefit from different instructional strategies, teachers get the chance to evolve and step out of their professional comfort zone to learn new things (Lock et al., 2016; Ferguson & Wilson, 2011). Co-Teaching promotes joint reflection of the course as well as self-reflection to learn more about themselves and their teaching practice. What makes the course successful? how do we benefit from each other? how does the pedagogical relationship develop? what do I/we want? etc. are mainly questions to be asked in the reflection process (Lock et al., 2016; Ferguson & Wilson, 2011).

Challenges and Recommendations for Co-/Tandem-Teaching Instructors

In addition to the previous benefits of Co-Teaching, teachers may face challenges, especially in the early stages.

One of the biggest challenges might be opening up to someone else's professionalism and being able to handle learning about strategies not previously known (Ferguson & Wilson, 2011). Teachers who are thinking about working in a Co-Teaching context should clarify if they are ready to leave their teaching habits and to share responsibilities or teaching activities as well as dealing with different points of view of preferences and teaching styles (Cook & Friend, 1995). Once you're clear on that, it's a good introduction to what Co-Teaching is all about. It's about "two teachers working together as a team to provide different viewpoints on topics as needed" (Ferguson & Wilson, 2011, p. 65).



Following on from this, it can also be difficult when Co-Teaching circumstances change and teachers bring expectations that have arisen from previous Co-Teaching programs. This leads to the term being open for vulnerability and having the trust to speak it through. An effective collaboration is based on interacting with each other, making decisions together, and providing as well as being prepared for feedback. The main goal is to transfer from an individual perspective to a collaborative perspective. Teachers need to find collaborative decisions, which requires trust in each other's teaching experience and open communication. But not only do teachers need to trust in each other, but it is also a process for the learners to open up to new instructors and become active participants in the class. Besides trust, respect and self-respect as well as finding similar ideas influence a successful collaboration (Lock et al., 2016).

Another challenge is that Co-Teaching requires a large amount of time (Lock et al., 2016; Yanamandram & Noble, 2005). Therefore, it is highly recommended that both partners commit to

share responsibility in the Co-Teaching process. Co-Teaching is about building a relationship and finding together a new teaching identity while sharing different perspectives and approaches (Lock et al., 2016). Co-/Tandem-Teaching is based on the fact that teachers are jointly involved in the design and implementation without being subject to hierarchical structures (Cook & Friend, 1995; Kricke & Reich, 2016; Rottach, 2019). However, hierarchical structures cannot always be avoided. Especially when a teacher from the theoretical area works together with a person from the practical area, like within service-learning projects in HEIs, hierarchical structures can quickly arise. According to Rottach (2019), a teacher from the professional practice area is quickly overwhelmed and has less experience in the field of higher education teaching compared to a teacher from the scientific area. Therefore, one task may be taken over and automatically an unequal distribution of tasks arises. It is important that this inequality does not affect the course (Rottach, 2019).

How to Create a Collaborative Working Relationship in Co-Teaching

Getting into a Co-Teaching relationship, different topics can be helpful to grow with each other.

One of the key elements is to **plan things ahead** because “[p]lanning allows everyone to start ‘on the same page’ and identifies potential misunderstandings or problems in advance” (Cook & Friend, 1995, p. 13).



This requires at the beginning of the project to be aware of what the project is about, to make sure what are the students' needs and to identify what is unclear as well as to gather mutual expectations. These are relevant aspects to reach the project goals. The planning process also includes to talk about the distribution of responsibilities so no one feels overwhelmed, days and times of joint planning time and what records can be helpful for the working process. Following these recommendations, open communication is essential for a collaborative partnership. This means talking about, what are instructional and personal values about teaching and the role of a teacher, the role of students and learning as well as how these values influence the personal teaching practice. This includes talking about personal quirks in the teaching process/environment, which could affect the relationship. In addition to collaborative work in the planning process, it is also necessary to act as a team in the classroom environment and during the lesson. Teachers should also secure the equivalency of both teacher roles in the classroom

to the students. This can be secured visually e.g., by arranging a working space for both teachers in the classroom or splitting instructions. Creating a working relationship can also contain agreements about classroom routines such as instructional routines e.g., the organisation of written assignments such as report formats or how to include students for assistance. Since feedback is another key element for building a healthy relationship, it might be helpful to talk about how to give each other feedback to avoid mistakes or vulnerability. Some teachers might prefer direct feedback while others take some time and need a day to settle, some prefer positive feedback first, others do not. But not only feedback between the teachers contributes to the success of the project. An appropriate and steady evaluation from the target group is also needed for the successful development of the program and effective teaching arrangements (Cook & Friend, 1995).

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06

CASE STUDIES ON INTERGENERATIONAL DIGITAL SERVICE-LEARNING

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6.1. Methodology and Empirical Base

For the case study research, we followed the following research question: **Which practices of intergenerational digital service-learning in higher education exist in Europe and how can they be described?**

We collected n=20 qualitative semi-structured interviews with programme coordinators, lecturers, and students from service-learning courses in European universities and higher education institutions.







The project partners first collected information through online research, in which they looked for good practice service-learning courses, which included an intergenerational and/or digital component. After the selection of adequate case studies, suitable study participants were contacted for interviews (either students or people responsible for the activity, such as teachers, lecturers, or programme coordinators). All partners carried out at least two interviews in their

respective countries. Whenever possible, tandem interviews were preferred for intergenerational service-learning experiences, contrasting the perspectives of the older and younger people involved. The interviews had an average duration of 40 minutes (see annex for interview guide and overview of interview partners). 17 interviews were held online using video tools, and three interviews took place on-site. The interviews were audiotaped and transcribed verbatim. Based on the interview transcripts, the data analysis was carried out following thematic analysis (Braun & Clarke, 2006).



6.2. Overview of Case Studies

Overview of case studies per country

COUNTRY	NUMBER OF CASE STUDIES	METHOD AND SAMPLE DESCRIPTION	NUMBER OF PEOPLE INTERVIEWED
	n=7 case studies	7 student interviews, 1 teacher interview	n=7 participants
	n=1 case study	1 project coordinator interview	n=1 participant
	n=5 case studies	1 tandem interview with 2 teachers, 4 teachers interviews	n=6 participants
	n=2 case studies	1 teacher/researcher interview, 1 student interview	n=2 participants
	n=3 case studies	1 teacher interview, 1 tandem interview with teacher and community partner, 1 tandem interview with teacher and student	n=5 participants
	n=2 case studies	1 coordinator interview, 1 student interview	n=2 participants
TOTAL	20 CASE STUDIES		23 STUDY PARTICIPANTS

Overview against the inclusion criteria of the study

“Service-learning is a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility.” (Bringle, Hatcher, & McIntosh 2006, p. 12)

INCLUDED (N=13)		EXCLUDED (N=7)
ALL CRITERIA FULFILLED (N=11)	ALL CRITERIA FULFILLED BUT ONE (N=2)	TWO OR MORE CRITERIA NOT FULFILLED (N=7)
#1 Intergenerational service-learning with refugees@UniClub ***	#13 Intergenerational service-learning in Film Studies * (no identified community need)	#15 Learning. Commitment. Responsibility ** (no organized service activity, minimal reflection)
#2 Service-learning with “Jugend am Werk” in Graz ***	#14 Culture Course – Volunteer Matching Mainz ** (no identified community need)	#16 Intergenerational learning involving the Senior Study programme 50+ * (no organized service activity, no identified community need)
#3 Austrian Railways Sustainability Challenge ***		#17 Applied project work in Krems ** (no identified community need, no civic responsibility)
#4 Siemens CO2 Reduction Sustainability Challenge***		#18 DCU Intergenerational Learning Programme * (not course-based, not credit-bearing, volunteering)
#5 Siemens Car Sharing Sustainability Challenge ***		#19 121digital ** (not course-based, not credit-bearing, volunteering)
#6 Service-learning in multigenerational housing in Hessen ***		#20 Intergenerational fieldwork for students of Social Work *** (no identified community need, no organized service activity)
#7 Service-learning between a school and a nursing home in La Rioja ***		#21 Gli Stagisti e-Service-Learning project (no organized service activity, no reflection) **
#8 Intergenerational service-learning in physical education in Castellón de la Plana ***		
#9 Service-learning as part of social pedagogy with the City Council in Valladolid *		
#10 Service-learning with pre-service teachers in a remote municipality in Mora ***		
#11 Service-learning in the Ears to the Soul Programme with lonely people ***		
#12 Designing didactic concepts for art talks at the museum in Kassel ***		

* case studies with an intergenerational dimension, ** case studies with a digital dimension, *** case studies with both dimensions

6.3. Case Study Descriptions

This section provides a brief description for each case study including the following:

1	TITLE OF THE CASE STUDY
2	UNIVERSITY/HIGHER EDUCATION INSTITUTION, IN WHICH THE CASE STUDY IS EMBEDDED
3	CONTENT OR OVERARCHING TOPIC OF THE CASE STUDY/SERVICE-LEARNING ELEMENT
4	DESCRIPTION OF THE "SERVICE" AND THE "LEARNING" PART
5	DESCRIPTION OF THE INTERGENERATIONAL AND DIGITAL COMPONENTS OF THE ACTIVITY

Case Studies Fully Included in the Study

No1 Intergenerational service-learning with refugees@uniclub



Students in teacher education at the University of Vienna, Austria, have the opportunity to participate in the course "Communication Spaces: Chances and Limits of Multilingualism". This course aims to address multilingualism in the classroom and accompanies students who chose practical fieldwork such as "UniClub", "LernClub" or "StudyBuddy". The "UniClub" helps children and young people with a refugee and migration background in school matters and supports them to finish school with a high school degree. In the case study, both intergenerational learning and digital service-learning experienced during the Covid-19 pandemic are touched upon.

No2 Service-learning with "Jugend am Werk" in Graz



As part of the study module "Practice Project" at the University of Graz, Austria, students were accompanied in planning and implementing projects with community partners. The interviewed student studied within the extension studies "Leadership" and made it her task to coordinate the student team of the module and to keep an overview of the project, which was instructed together with "Jugend am Werk", an Austrian social organisation. The team consisted of several students who were around twelve years younger than the interviewed student (intergenerational service-learning). The aim of the service-learning activity was to help "Jugend am Werk" analyse four specific areas of the company: Financing, legal principles, staff performance, and management of the company's rental housing. For the team of the interviewed student, the main objective was to identify staff performance through interviews. In the case study, both intergenerational learning and digital service-learning experienced during the Covid-19 pandemic are touched upon.

No3 Austrian Railways Sustainability Challenge



The "Sustainability Challenge" is an interdisciplinary module in the study programme students from different universities in Austria can attend. Recently, the University of Graz has become part of it. As part of the course, students work on the reduction of emissions together with the Austrian Railways with peer students from different disciplines of the University of Graz and a technical department of the Austrian Railways ("ÖBB-Technische Services-GmbH"). The goal is to develop a set of measures for climate-neutral operations, which help to reduce emissions. Students in this case study work with businesspeople about a decade older than them. The main part of the "Sustainability Challenge" takes place online. Meetings between students are mostly hybrid (due to the COVID-19 pandemic).

No4 Siemens CO2 Reduction Sustainability Challenge



The "Sustainability Challenge" is an interdisciplinary module offered at several universities in Vienna and Graz, Austria. The aim of the module is to guide students to support an Austrian company with a specific concern. One of the companies was Siemens, which wanted to reduce CO2 emissions in logistics. In this case study, the students worked on a guideline on how Siemens' truck transport could be made more sustainable. The guideline was developed in collaboration with the community partner. The Siemens employees were several years older than the students (intergenerational service-learning) and due to the COVID-19 pandemic the meetings took place both, on-site and digitally, as well as hybrid (digital service-learning).

No5 Siemens Carsharing Sustainability Challenge



The "Sustainability Challenge" is an interdisciplinary module offered at several universities in Vienna and Graz, Austria. The aim of the module is to guide students to support an Austrian company with a specific concern. One of the companies was Siemens, which wanted to reduce CO2 emissions in logistics. In this case study, students worked on a car sharing program to increase the sustainability of employees' mobility. A group of three students met regularly with Siemens employees to set up the car sharing program and develop an app (intergenerational service-learning). Due to the COVID-19 pandemic, the meetings took place online, and the parallel seminar course took place online, on-site, or hybrid, depending on the pandemic activity (digital service-learning).

No6 Service-learning in multigenerational housing in Hessen



At the European Business School (EBS) in Oestrich-Winkel, Hessen, Germany, interdisciplinary service-learning courses are offered. The courses take place under the guidance and planning of a teacher and the respective community partners. The service-learning projects mainly take place in senior citizens' homes and multigenerational houses in Oestrich-Winkel, Germany. One example of service-learning is a smartphone workshop for seniors in the multigenerational house, which took place on-site and was prepared and conducted by six students from the university. During the service activity, students learned to adapt to the needs and requirements of older people. Later in the course, they reflected on their experiences in dealing with older people and how the implementation of the didactic methods worked. Students also kept a journal for reflecting on their learning process. They evaluated their project by sharing their experience with others in the course and by writing essays. In total, the students spent 60 hours in the community (service) and 30 hours with reflection in the classroom (learning) during the semester.

Nº7 Service-learning between a school and a nursing home in La Rioja



This case study was developed between students in a fifth and sixth grade class of an elementary school in La Rioja, Northern Spain, coordinated by a teacher, a doctoral student in education, between a nursing home during the Christmas season and on Book Day. The service to the community consists in accompanying the elderly on a special day to make them feel better and share memories of stories and lyrics of typical songs (historical memory). The participants are 100 elementary school students from different classes (the average age is 12 years) and 15 people from the residence (aged about 80 years). The goal is to maintain historical memory and keep the stories of the past alive through younger generations. This service-learning project was carried out in 2021 and coordinated and supervised by the schoolteacher and the coordinator of the senior residence. This project also includes a digital aspect, since digital devices and applications were used during the development of the process.

Nº8 Intergenerational service-learning in physical education in Castellón de la Plana



In this case study, students from the University Jaume I of Castellón de la Plana, Spain, organize an intergenerational service-learning activity with older people from lifelong learning schools that are part of the network of adult schools in Castellón as part of the Physical Education module. The main aim is to strengthen psychomotricity together with the older adults who participate. The students perform the activities previously explained by the instructors with a group of older people and adapt the activities according to their needs (service). Students benefit from teaching practice, their impact of teaching activities, and have time to evaluate their opinions and receive constructive criticism (learning). The community participants are about 80 people from 12 different lifelong learning centers in Castellón de la Plana, while the university students have an average of 20 years. The service-learning covered a period of four months in 2021, during which bi-weekly meetings were held. The aim was, on the one hand, to teach young students to adapt physical education content for older people, and on the other hand, to teach older people how to move and train their bodies in a healthy way, so that they maintain their physical health.

Nº9 Service-learning as part of social pedagogy with the City Council in Valladolid



In this case study, second and fourth year students of the Social Pedagogy programme of the university conduct intergenerational service-learning as part of the subject “Social Dynamization Techniques”. They perform educational workshops and physical activities (group dynamics and theatre) and two programme coordinators guide the students on how to work with adults with different content and design. During a four-month period in 2021, the preparation and organisation of the workshops were conducted in two sessions. The participants are 20 adults (average age of 75 years) from a public residence of the Social Services Network of the Municipality of Valladolid in Spain and 20 young university students with an average age of 20 years. The aim of this service-learning is to bring the university closer to the community through participatory activities.

No10 Service-learning with pre-service teachers in a remote municipality in Mora



This case study within the project "Läxhjälpens digitization project" describes a collaboration between the Läxhjälp Foundation (an organisation focusing on helping students with their homework), Mora municipality and the innovation agency Vinnova, which was founded to tackle the educational challenges of students in sparsely populated municipalities in Sweden. Students in this municipality in central Sweden in many cases lack support to pass primary school and enter high school. The project involves digitalizing homework programmes by pre-service teachers enrolled in university teacher training. This part of training is compulsory for pre-service teachers depending on the teaching programme, bearing app. 30 credit points. An older experienced teacher educator supervises and leads the students in conducting the service. The service-learning project started with 30 students in Mora municipality who offered digital homework support to 165 students throughout the municipality in the fall of 2021. The project has in addition developed a digital tool that has been distributed to ten rural municipalities that show school results well below the national average. A number of key factors for successful cooperation between the public sector, NGOs and university communities were identified, such as early anchoring, reliable contact persons and the importance of having several points of mutual interest between the generations.

No11 Service-learning in the Ears to the Soul Programme with lonely people



The Matej Bel University in Slovakia, in cooperation with a regional volunteer center, launched the "Ears to the Soul" programme, a telephone counselling service for lonely people. The format of the programme was "one-on-one." Pairs of volunteers and lonely people were formed, ensuring an individualized approach, better mutual understanding, and consideration for the person in need. The volunteer called a specific person on a regular basis (three times a week). Students enrolled in Social Work were offered the opportunity to complete the programme in lieu of a professional internship that they were unable to complete during the summer term. The educational goal of the programme was to develop communication skills with the clients, empathy, and personal and social responsibility, which are basic competencies required in social work. The students' main task was to be in telephone contact with a lonely person, with the contact always initiated by the student. Each week, the students completed a log of the conversations they had. This included a brief reflection and evaluation of the contacts with clients. Each student was assigned a tutor, who was a lecturer from the Faculty of Social Work, who assisted them in areas of reflection on the process of developing or deepening communication skills. In addition, group supervision was offered. The work in the programme was scheduled for a period of 3 months. From May to July 2020, a total of 12 social work students participated together with 12 clients.

No12 Designing didactic concepts for art talks at the museum in Kassel



The University of Kassel regularly offers service-learning projects for Master's students at the Department of German as a Foreign Language/German as a Second Language. The students engage with concepts of learning arrangements for out-of-school learning places. One example of service-learning is the cooperation with the Museum Fridericianum and the Documenta in Kassel. This project dealt with the examination of contemporary art in connection with didactic concepts of German as a foreign language/German as a second language. Due to the Corona pandemic, digital tools were used to convey the content online (via Zoom). The practical part was completed in the museum in teams of two students. For this, the student teams visited the museum, tried out different methods for art talks and made audio recordings, which were later evaluated. Towards the end of the semester, the programme coordinator organised a buddy programme in which one student worked with one student from school. They first met online (via Zoom) and then visited the museum together, where they talked about art. These conversations were recorded and then evaluated concerning the underlying didactic concept.

No13 Intergenerational service-learning in Film Studies



"Screening Age" is the title of a course that took place in the winter term of 2017/2018 at the University of Jena, Germany, as part of the subject of Film and Theatre Studies. In the course, students watched various films on the topic of aging and discussed them in class based on the literature they had previously read. A group of students was responsible for a workshop that took place in a retirement home. While the students planned and conducted the workshop themselves, the teacher advised them. For the workshop, all students visited the home. Together with the elderly, who were between 80 and 85 years old, they watched the film "Grandma and Bella" by Alexa Karolinski. After the film, the facilitating students stimulated an intergenerational dialogue between students and residents with the help of various materials (e.g., postcards). In the next lesson at the university, the students reflected on their experiences. **This case study has a strong intergenerational service component but does not genuinely address a real community need, since neither the manager nor the residents asked for a specific service. The activities did not involve any use of digital tools.**

No14 Culture Course – Volunteer Matching Mainz



The "Culture Course" is a course offered by Johannes Gutenberg University Mainz, Germany, to which students of all disciplines can register. The course covers a range of different topics and projects that deal with volunteerism. The students collected and researched volunteer institutions and initiatives that already exist on campus or are known beyond. The task of the students was to organize and host a fair on the topic of "volunteer matching". This allowed students to develop their skills, which are needed in project and event management, and to gain practical experience. Due to the COVID-19 pandemic, the course took place digitally. **This case has no identified community need, as organizing a fair does not provide a clear added value to society.**

Interesting Case Studies Excluded from the Current Study

No15 Learning. Commitment. Responsibility.

The optional university course "Volunteering in the Social Sector. Learning. Commitment. Responsibility." (L.C.R.) is open to students of all disciplines from the University of Education and the Johannes Kepler University in Linz, Austria. L.C.R. is a project that has been implemented since 2015 in cooperation with the University of Education in Linz and the Independent State Volunteer Center (ULF). Students participating in the project have the opportunity to become involved in social organisations and projects in Austria. The interviewed student is involved for the second time with the association "Lebenshilfe", which is a social organisation that he supports as a volunteer during the lecture-free period in the summertime. He is still working in a residential community where people with different disabilities and from different generations live together (intergenerational aspect). The digital aspect is described by the student when he talks about the university during the COVID-19 pandemic. However, the student does not really report an organized service activity and only minimal reflection, which should be ensured by the university in service-learning. This case does not involve an organized service activity and does not address an identified community need.

No16 Intergenerational learning involving the Senior Study programme 50+

The project "Ehrenamt ist Mainz" was an intergenerational learning project at the Johannes Gutenberg-University Mainz, Germany, that took place in cooperation with Master students of the Educational Science programme (with a focus on adult education and media education) as well as participants of the Senior Study programme 50+ over the period of one semester. The project was carried out within a course connecting theory and practice (usually in the framework of internship courses) using joint reflection exercises and biographical exercises for both generations. The course took place on-site under the direction of three teachers and was designed for 10-12 sessions with about 15 Master students as well as 15 participants of the Senior Study programme 50+. The focus was on collaborative learning and sharing of experiences. The topic of the course was civic engagement. For this purpose, representatives from the service-learning sector (digital ambassadors, neighbourhood associations from the community, etc.), from the public and from other universities were invited. **This case does not involve an organized service activity and does not address an identified community need, but can rather be viewed as an intergenerational learning experience at university.**

№17 Applied project work in Krems



The module "Project Work" is part of the curriculum of the study programmes Educational Management and Higher Education and Science Management at the University of Continuing Education in Krems, Austria. It was not originally designed as a service-learning course, but is increasingly taking the form of one. In this course, students work together in small groups to create needs-based projects. Due to the fact that students work and study in parallel, the projects that are designed are usually tied to the student's own working environment. While brainstorming ideas for a project, students work with typical project management tools. During their collaboration with a municipal partner, students learn to apply specific tools in project work. In doing so, they work on a concept, which is then usually implemented and designed in the form of a product.

During the COVID-19 pandemic, a student created video clips and published them on YouTube, in which she shows objects that used to be part of everyday life but are no longer used and in some cases no longer familiar with the younger generation. It was possible to guess which object was shown by using the comment function of YouTube. In this way, she took up intergenerational themes and presented them together with her mother, and in some cases also with her son, in an intergenerational way. **However, this case study does not focus on a real community need and the civic responsibility of students is not the main focus of Project Work.**

№18 DCU Intergenerational Learning Programme



The Intergenerational Learning Programme (ILP) began in 2008 to engage older people from the wider community and students from Dublin City University (DCU) in teaching and learning together. It started with a small number of classes on Saturday mornings, where older people were joined by DCU student volunteers to learn basic ICT skills, and gradually evolved, through engagement and dialogue. In a practical sense, there is one-to-one engagement between a student and an older learner who share a laptop, tablet or computer. Through their participation in the ILP, some learners have overcome their fear of technology, and become proud participants in the digital world; some have gone on to join undergraduate degrees, and others have discovered a talent for writing. Students between the ages of 18-22 engage with senior citizens mostly above retirement age (65+). Many of the older learners were former professionals, who were looking for ways to re-skill and up-skill and even just to find a new hobby after retiring. The value of keeping their minds active and challenged is an important service that learners have benefitted from. Certain learners have participated in the classes individually and then shared the opportunity with clubs and groups they are involved in, creating wider impact. **This case focuses on a volunteer activity by students. The service provided by the students is not course based (students do not get credits). However, the service activity can be considered an example of intergenerational learning.**

No19 121digital



121digital is a not-for-profit social enterprise, which facilitates IT-skills-learning for local adult learners tutored by volunteer students in schools, universities, and IT colleges usually in five-week courses. The 121digital programme supports and encourages those young people who find the internet easy to share their skills with older people who struggle. Lessons are free of charge. Learners bring their own laptop/tablet and/or smartphone to lessons and learn at their own individual pace from their tutor. The 121digital course is informal in structure. Older learners have the freedom to choose their topics and learn accordingly. Upon completion of the course, older learners have their own personal handbook of questions and answers, which are relevant to them. Older learners benefit from making a social connection with their younger tutor as well as learning how to use their preferred digital devices. They gain improved communication through audio, visual and other digital tools, increased ability to access information online and empowerment for becoming more independent and confident to use digital platforms. Training is provided to the tutors who also benefit from volunteer experience, which they can bring into their university learning. Tutors learn how to teach, and they practice interpersonal skills. **This case focuses on a volunteer activity by students. The service provided by the students is not course based (students do not get credits). However, the service activity can be considered an example of intergenerational learning.**

No20 Intergenerational fieldwork for students of Social Work



This case study is located within the Sociology programme of Uppsala University, Sweden, in the area of social work with disadvantaged groups, connecting sociology students with an older social worker with long practical experiences. The goal is for the students to acquire skills in critically and theoretically reflecting on their own professional role and identity in social work. The course contains and covers skills training in carrying out tasks in social work with a professional approach, such as planning, investigations, professional interviews and documentation, supervision of work-based training within the various areas of social work by an older experienced social worker. The focus is on active knowledge sharing between the student and an older social worker at individual, group and community level. During the COVID-19 period this form of intergenerational learning was moved online. Since social work in Sweden is highly confidential and protected by the law, the interaction between tutor, mentor and student was divided into two parts: 1) general tutoring and interaction through Google meet and Zoom, and 2) individual cases where students were involved through the platform of municipality for social work. **The case study has no identified community need and no organized service activity and can thus be considered an example of intergenerational learning.**

No21 Gli Stagisti e-Service-Learning project



The project Gli Stagisti at the University of Rome (LUMSA), Italy, addresses the insertion of students into the labour market. This idea originated from students' initiative graduation feeling uncertain about how to proceed to find their way in a working environment. "Gli Stagisti" is an e-Service-Learning project carried out in 2021 that involved three engaged students from different undergraduate degree courses (two from psychology, one from communication sciences). The students decided to create an Instagram page called "Gli Stagisti" in order to help young people better orient themselves and take advantage of all the opportunities available in the job market. On the page are published weekly posts on various topics such as CV writing and mistakes to avoid, jobs that can be done after university, the recruitment process, or the job interview. The students created an indirect Service-Learning project for a web community by collaborating with colleagues from different areas: marketing communication sciences and digital media and psychology of organisations and human resources. **This case can be considered as partly service-learning, as there was no organized service activity and reflection was kept to a minimum in an online mode.**

6.4. Findings of the Case Studies

According to the theoretical conception of the IDOL-project, the interview data were grouped into three main themes: (1) Intergenerational service-learning, (2) digital service-learning and (3) tandem teaching. The analysis of the interview data revealed that most findings could be located on the topic of intergenerational service-learning. Fewer findings were identified on the topic of digital service-learning and tandem teaching.

6.4.1. FINDINGS ON INTERGENERATIONAL SERVICE-LEARNING

From the analysis of the interview data, we identified five categories as being relevant for intergenerational service-learning. These are: 1) Interactions of different generations 2) Age perceptions 3) Intergenerational learning 4) Intergenerational teaching 5) Other diversity criteria matter.

Interactions of different generations

When thinking about intergenerational service-learning, the first question is how people of different generations come in contact with each other. In the interviews conducted, study participants explained that a basic willingness and openness are required to engage with other people and, in particular, to come into contact with people

of other generations. Younger as well as older people reported being interested in the lifeworld and interests of the other person (#1) and showing this curiosity in a respectful way, for example by making an effort to create a pleasant atmosphere (#13). It was also described as positive when community partners give students the feeling that they are wanted in the company and that their creative ideas are welcome (#5). Another theme was taking enough time to prepare for contact with the other generation and to be able to become actively involved in the process (#13), in particular on concrete topics and the reality of the other's life (#15). Finally, it is about the willingness to take over responsibility (#15), to commit and engage in the concerns of the other person (#1), and to get involved in being together or working together (#13). These themes were identified as crucial to experiencing an intergenerational interaction. If both parties explained themselves as ready and open to working together, then this event could be diagnosed as the first common ground, since it already made them share the first common opinion about the project (#3):

“Also, you have to say, if you already have a, well I think at least that was also, because you are already a bit in a bubble here, if you put seven students who participate in the Sustainability Challenge together with the sustainability management of ÖBB. You don't have people meeting who would have completely contrary opinions on the topic, so it's already implicitly clear that we won't get into any big arguments, and that everyone basically has the same opinion. And the age difference doesn't make much difference anymore when you're talking about a topic where you already know that you're on the same side.” [Student, #3, 4/175-182]

This openness also includes the reflection, recognition, and realisation of one's own generation-specific qualities, which was addressed in different ways during some of the interviews: Students discussed their own way of working with its advantages and disadvantages and considered how they could learn to organize themselves better, divide working steps in the group more clearly, and manage their time more effectively (#5). Reflecting on one's generational qualities was also addressed in terms of one's life experience and related skills (for example, when it comes to organizing and leading a group: #2) or one's own emotional involvement on a particular topic (for example, on sustainability: #4).

“It was already a topic in the eighties with nuclear power and the green party (an austrian left-wing political party), but no one actually took it seriously. And now you just have to read the newspapers and there are at least ten reports of environmental catastrophes or some kind of protests, fridays for future, which is also a movement by the new generation. Greta thunberg, for example. Erm so something is happening, something is happening”. [Student, #4, 5/233-239]

Some study participants told us that commitment, organisation, a sense of responsibility, reliability of all those involved (#2) as well as mutually respectful and honest interaction are necessary for good cooperation (#5). One student defined taking her suggestions seriously, recognizing and valuing her work, and understanding her situation as a "principle" in dealing with each other (#5, 7/297-315). It was also reported that the attention to and understanding of the reality of the other generation's life (topics and time) and the related empathetic interaction (#19), the involvement of both generations, and the equal encounter at eye level (#13) made the interaction easier.

The programme coordinators and teachers of intergenerational service-learning courses found that students' conceptions about older adults changed during the course and that they learned how to interact with older people:

“The students of the university were surprised to see that the older people were not second class people, but that they wanted to live and learn”. [Programme coordinator, #8, 38-40]

“For the students it was very helpful to learn how to deal with them and how to write down these histories. And also related to their course, how to write biographies and autobiographies”. [Programme coordinator, #11, 532-534]

Age perceptions

Another common theme in intergenerational encounters were differences and similarities, and in general, perceptions of age and generations. On the one hand, participants described differences in the way of learning and working – especially in terms of approaches (motivation and temporality: #3). The better the participants knew each other, the better they were able to evaluate their skills (#13).

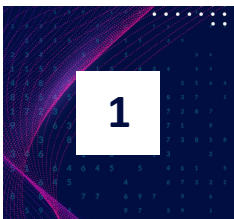
In addition, participants described how differently generations live and what issues concern them (Student Life: #5 and #1). This goes hand in hand with different needs regarding life planning and security (#1) or different attitudes towards social duties and responsibilities (#1). Furthermore, they addressed how life and work experience affects behaviour and performance (confident behaviour, nervousness: #5; #4)

“Otherwise, of course, it was just the case that the individuals just had much more experience in how to behave in such a business world, how such a meeting runs, how all these business things, how the habitus is there. And of course, that's simply because age goes hand in hand with experience, and they've probably had a thousand meetings like that and i've only had five. And then, yes. Of course, that goes hand in hand with age, that they behave much more confidently and we as students just didn't know all these rules of behaviour, how to talk to each other, how to interpret the little things”. [Student, #5, 4/172-180]

Several students reported that the older generation was not very open to learning new things and to question their own ways of thinking or habits – for example, when it came to the topic of sustainability (#5; #4) or digital media/apps (#5). This limited openness to digital media is also linked to a generational difference in the use of digital devices and media (#1; #2).

Intergenerational learning

In most of the interviews, **intergenerational learning** is reflected as an important part of intergenerational service-learning. According to previous research, intergenerational learning can take on three different forms of learning (Franz & Scheunpflug, 2016, p. 28). These learning forms were also identified in the interviews.



LEARNING FROM EACH OTHER takes place when one generation informs and supports the other generation (usually the younger generation learns from the older).

Interviewees learned from the other generation mainly when they used specific aspects of the other generation's way of life as a model when they were impressed by skills and wanted to learn from them. For instance, the older wanted to learn from the younger generation to develop their digital skills (#2; #19) and to work less grimly (#1). The younger generation, in turn, wanted to learn to have more self-confidence and trust in their own abilities (#5) and to be more confident in presenting themselves in meetings, to be better organized and structured during the work phase, and to estimate work more accurately in terms of time (#5; #1), and to gain insight into the real world (#5; #3; #10).

“What i have learned for sure is to be more confident, i think, just like that. I really noticed that they are sovereign in the way they tell their stories and for them it's just the way they say it and for me it's like, i suggest something and then maybe i say right away: yes, but only if it is appropriate. I thought to myself, maybe you could do it that way, and i noticed that people who don't do it that way then simply say: that's how we do it. And then they discuss it, i don't mean that in a negative way, i don't mean that they become bossy or something, but simply that they present what they have worked out more confidently. And i present it much more insecurely. And i'm not quite there yet, it's just a process, but in any case, i've noticed how much more insecure i am compared to these older people”. [Student, #5, 6/275-7/297]



LEARNING WITH EACH OTHER involves different generations engaging together on a topic, with no generation holding an expert status. In the interview data, we identified this type of learning as a reciprocal learning process, where each of the generations learns something about the other.

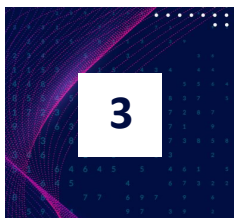
The learning objectives of an intergenerational service-learning course are thus two-sided. In the service-learning course Physical Education for Adults in Castellón (Spain) (#8), student teachers prepared physical activities for participants in an adult centre. The project coordinator emphasizes the reciprocal learning process as follows:



“The first objective was to improve the training of student teachers and secondary development of motor skills of adults.” [Project coordinator, #8, 58-59]

The programme coordinator of the Senior Study Programme 50+ in Mainz (Germany) (#16), in which young and older students take part in a course together, also points to the mutual benefit of intergenerational programmes, in which each generation contributes its life experiences:

“That is, students prepared the texts, as did the 50+ students. They reported from their own experiences, so we also had biographical exercises where you naturally come to different things due to the age tension and life experiences and these were all, i think, insights and experiences for all students.” [Programme coordinator, #16, 116-121]

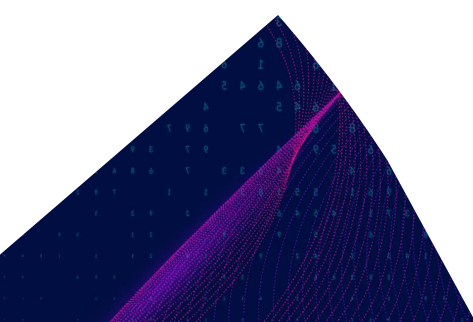


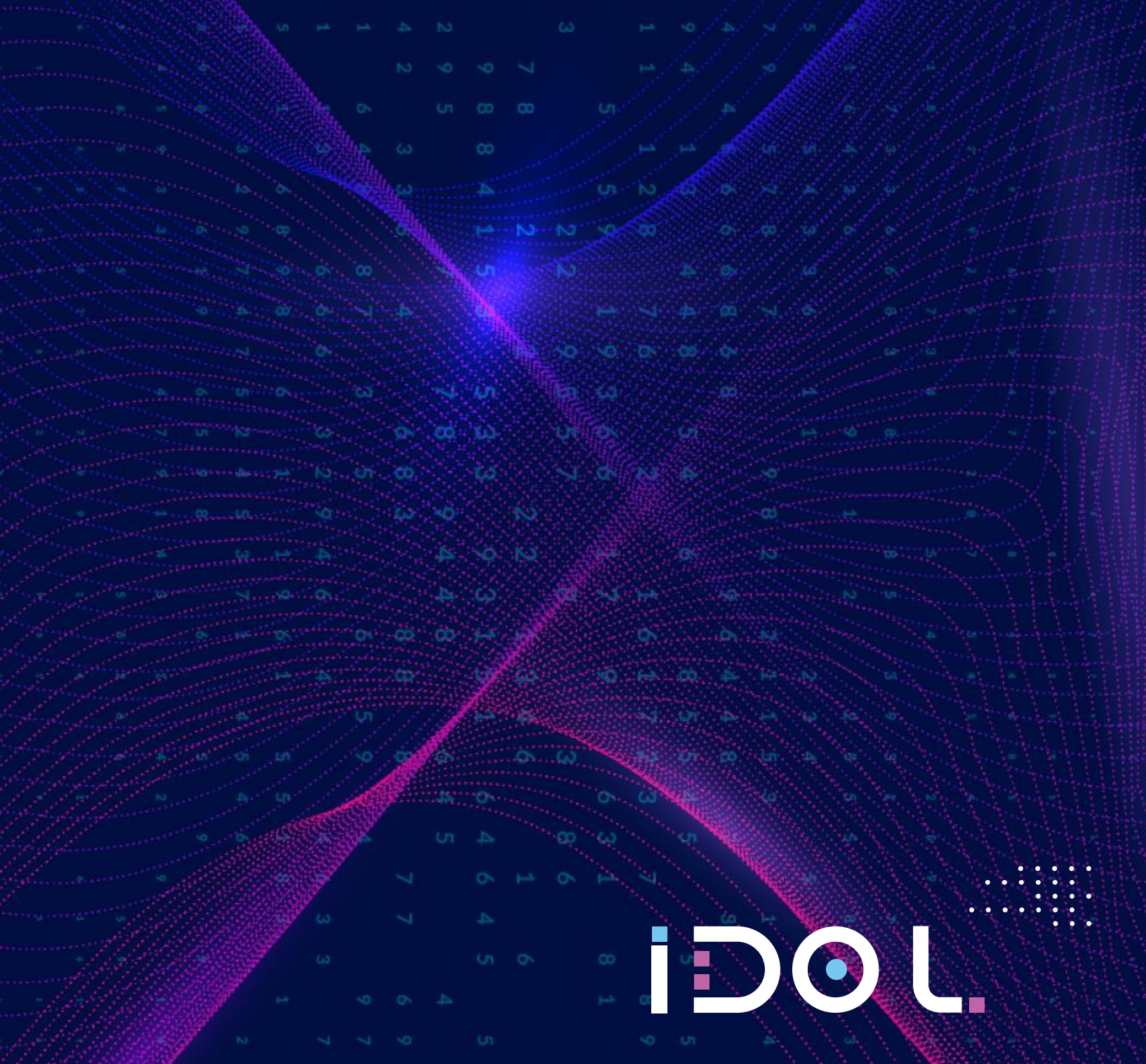
LEARNING ABOUT EACH OTHER focuses on the historical and biographical experiences of one generation. Individuals learn about each other when life experiences of one generation are part of the learning process.

Aspects of learning about each other were recognized when pre-assumptions/conceptions about a specific generation did not become true and the person was surprised and impressed by that specific experience. Furthermore, it became visible how important it is to learn to properly interpret the "language of the other person" (#1, 9/396-340):

“I just took it as a nice gesture. Also, in terms of the social relationship. So, we worked very closely together. For me, it was a bit like, i don't want to say he thinks i'm cool, but not embarrassing enough that he couldn't take me with him, even if a few friends were there or something.” [Student, #1, 9/404-408]

This is also related to the desire to understand the generation-specific life and point of view of the other person (#2; #1; #5; #4; #10).





Intergenerational teaching

Higher education teachers offering intergenerational service-learning address the learning needs of at least two different age groups, e.g., younger and older students, younger students in school and older students in higher education. In this sense, they carry **out intergenerational teaching**. This means that they need to be aware of the different learning routines and needs of the two target groups they are working with and take this into consideration from the very beginning when planning an intergenerational service-learning course.

Preparing an intergenerational service-learning course starts with finding a topic that is relevant to both target groups (e.g., younger and older students), or coming up with specific learning tasks that both generations can relate to: "The teaching must be adapted to both target groups and it is a challenge, that is a challenge in every heterogeneous group, that you design the tasks to be equally demanding for both target groups. With older people, for example, they may not have studied at all. (...) Or questions are completely different if you have already a completed life record". [Project assistant, #14, 119-127]



The project assistant reported that older people who have more life experience (“have already a complete life record”) than younger ones, approach tasks and content differently and ask different questions than younger age groups.

When working with two generations in intergenerational service-learning, it is important to consider the differences in learning habits that result from the different educational experiences the two groups have had:

“So, at the present time, there is much more reflection and much more attention paid to other methods in study courses than older adults are still used to and who are always very much focused on this consumption and taking on a passive role and who have not yet had insight into these self-directed learning processes”. [Programme coordinator, #16, 265-268]

The programme coordinator, who works as a teacher with older and younger students during the Senior Study Programme 50+ (#16), reflects that while the younger students are used to reflecting and adopting an active role in the course, the older students are more used to consuming content and taking a passive role. He sees his role as providing the older students with a new learning experience in which they become more involved themselves.

Teachers and programme coordinators point to the different motivations of younger students and older adults to participate in an intergenerational service-learning course. While students need the course for their studies (to earn credits) and do not always have the opportunity to choose a specific course, the older participants are more interested in the topic or the intergenerational component as part of the course. Overall, the teachers and programme coordinators report that the general motivation of both target groups participating in an intergenerational service-learning course is usually very high and that, in contrast to traditional courses, both groups are usually very well prepared (e.g., by reading the literature in advance).

In some intergenerational service-learning courses, students themselves prepare learning activities for community partners. In a service-learning course in Kassel (Germany, #12), students of German as a Foreign Language/German as a Second Language developed didactic concepts for art talks with school children in the museum. In doing so, they had to adapt the didactic concepts to the abilities of the school children, as the programme coordinator points out:

“You have to somehow manage to break it down to knowledge- and language-sensitive concepts, because it would be completely out of the question for the school children to have someone standing there and giving a lecture for 60 minutes. They wouldn't listen after five minutes. These are the bridges that have to be built”. [Programme coordinator, #12, 199-203]

Other diversity criteria matter

The analysis of the interview data with study participants participating in intergenerational service-learning shows that not only age is being made relevant as a category of difference. Rather, other diversity criteria matter and can be even more relevant than age. These criteria can be employment status, work experience, disability, or gender.

A student who took part in a service-learning project working on reducing emissions with employees of the Austrian Railways (#3) who are about ten years older reflects on what makes the difference between the two generations working together:

The biggest difference was probably not the age but the different position, yeah. Because now I'm in a university and I'm studying something, they're in a company and they have to bring something forward. [Student, #3, 6/26-29]

The student points out the different positions of the two groups working on a common task: While he is still in education and learning, the other has a job and must fulfil certain tasks and requirements. Different career paths in one generation can also be more relevant than age and stimulate the exchange between two generations, as one interviewee mentioned:

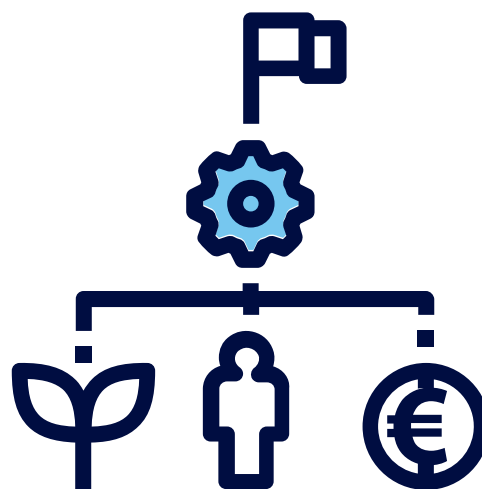
“These are not only generational views, but they are also somehow fed by other views. There are different career paths or no career paths or breaks in the careers of older people, and among students there are also somehow different life stories”. [Programme coordinator, #16, 177-182]

Furthermore, the age category itself is diverse. It depends on whether the older adults participating in intergenerational service-learning are still in an active and healthy condition and live independently or whether they are physically or cognitively disabled and live in assisted living homes. This difference is mentioned by a programme coordinator of the City Council Elderly service-learning course in Valladolid (Spain) (#9), where students prepare physical activities for senior citizens:

“Those who come from the nursing home are institutionalized elderly people and the others are elderly people who live autonomously, most of them in their homes”. [Programme Coordinator, #9, 195-197]

One student remarked that the task she and her colleagues had prepared changed when working with elderly people with dementia in a residential home. However, she appreciates this as an unexpected learning experience:

“But it was still incredibly exciting, because of course people who have dementia would have completely different conversations. So, these were much more immediate, of course, and not necessarily what one typically understands as memory work”. [Student, #13, 163-166]



6.4.2. FINDINGS ON DIGITAL SERVICE-LEARNING

Digital service-learning was less of a topic for the interviewees to elaborate on. The study participants reflected more on the general usage of digital tools in higher education than on the digital aspect of service-learning.

Ambivalence in using digital tools

Very few participants pointed out the differences in the usage of digital tools between the young and the older generation. The programme coordinator of the course Service-Learning in Residences for Elderly in Oestrich-Winkel (Germany) (#6), where students offer a smartphone workshop for senior citizens, makes clear that there is a big digital divide between the young and old generation:

“As far as digital media are concerned, there is of course little overlap, so it's more like worlds clash and I mean, increasingly for the elderly in the residential home, so for us these smartphones are a window to the world, but for them it's a wall if they can't use one”. [Programme coordinator, #6, 157-160]

The "world" that lies between the older and younger generation in dealing with digital tools has a positive effect on students. Students learn to critically reflect on their behaviour when they use digital tools in a situation when they see older people who are not familiar with them. Older people, in turn, have to be ready to name their fears and inhibitions in using digital tools before they can engage with them.

Digital tools were also used, especially during the COVID-19 pandemic, to maintain contact with older people living in residential homes. This also made it possible to protect participants involved in service-learning courses from infection.

“It would be about trying to create communication between the young students at the institute and the elderly people in the residence through online activities. (...) because due to the pandemic, grandparents could not have as much social support from their children, from other people, which could be something that we could make up

for at school and which, in a digital way, made it safer for them as well as for us”. [Project coordinator, #7, 36-42]

Advantages and disadvantages of using digital tools in higher education

Study participants mentioned several advantages and disadvantages of using digital tools in higher education service-learning courses.

The **advantages** are that digital service-learning can address a larger community and reach a wider audience. Some interviewees mentioned that the organisation of digital service-learning courses can easily take place online and that it is also easier to invite experts, who come from far away, for having a talk to students online. Other benefits of digital learning are the increased flexibility in terms of time as well as space, and thus the extended networking possibilities. Regarding sustainability, students also found the aspect of saving resources important. Participants reported having positive personal interactions when the initial meeting took place face-to-face, the digital environment was well structured and most of the participants turned on their cameras.

The **disadvantages** mainly concern the area of communication and social interaction. Interviewees indicated that digital communication reduces the perception of the other person (2-dimensional surface, where mostly only the person's face is visible). In addition, a large part of social interaction takes place "in-between" (e.g., chats in the seminar room), which is not possible with digital tools. Therefore, continuous communication via digital tools is important to maintain relationships. Study participants evaluated that it is more difficult to measure the impact of digital service-learning courses than of traditional service-learning.

Further, interviewees identified that having personal interactions and recognizing emotions is difficult when communicating online. People with few digital skills face a huge challenge when using digital tools for communication and need support. If this is not the case, these people are excluded, as are people who have no or only limited access. Furthermore, some interviewed people reported that it was difficult to find enough motivation to concentrate. Also, the position of the teacher changes when adopting digital teaching:

"And this is where the teacher's role changes. The teacher becomes not only the one who lectures and answers questions but also someone who creates environments so that the students can help and learn from each other". [Student, #10, 6/199-201]

6.4.3. Findings on tandem teaching

Tandem teaching was less of a topic in the interviews as very few study participants had experience with this teaching approach within the context of service-learning and many higher education institutions cannot afford to pay two teachers for one course. However, the interviewees overwhelmingly reported the benefits and positive outcomes of using the tandem teaching approach.

From the students' perspective, the following advantages of tandem teaching can be identified: Due to the introduction of a further perspective/approach/viewpoint, students might take more with them from the lessons. Due to the double number of lecturers, it is possible to choose a person based on personal sympathy, with whom it is easier to cooperate. Moreover, the variety in the way of teaching can contribute to increased attention and motivation. One student reports the possibility of communicating with the teacher at eye level, because the teacher-student hierarchy disappeared by tandem teaching.

For the teachers, the added values of tandem teaching are to exchange ideas and experiences in a team, to have a second perspective on what is happening in the classroom, to be supported in terms of content and to be able to support the next generation or to be supported. It turned out to be challenging for teachers to coordinate their teamwork, to work in interdisciplinary groups and to spend enough time planning it. Also, teachers working in tandem must be prepared to accept that they do not know the subject to which the other person is contributing:

“Of course, you also need people who are willing to get involved (in tandem teaching) and who have no problem if they don't know about something ”. (Programme coordinator, #16, 409-410).

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07

CONCLUSION

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This Guide “Practical Guide to Intergenerational Digital Service-Learning” is aimed at offering insights into intergenerational digital service-learning from the perspective of academic research and case studies with students and teachers.

The findings of the case studies show that most service-learning examples found during our research were both intergenerational and digital, although most of them had a focus on either aspect rather than both. Intergenerational service-learning case studies tend to connect older citizens in the community with younger students at the university, rather than facilitate intergenerational learning within the university in age-heterogeneous student groups. Senior study programmes, oftentimes offered at universities nowadays, seem to be spaces of such opportunities for intergenerational learning to take place, when younger, regular students are integrated. Tandem teaching with an intergenerational dimension between teachers was not frequently identified as a common practice in intergenerational service-learning. The study participants described their intergenerational learning experiences mostly as social learning and emotional learning, rather than cognitive learning about a specific topic. Social learning encompassed the readiness to engage with the other generation, openness towards different learning approaches and changing perceptions and stereotypes about the other generation. Most students stated having had experiences with emotional learning as well, like being surprised or irritated when learning with participants of another generation, and reacting emotionally to differences. Reciprocity in intergenerational learning was an aspect touched by both teachers (older adults/older students) and students, learning **from** each other (role modeling), **with** each other and **about** each other.

The case studies revealed more insights into the

intergenerational dimension of service-learning, rather than the digital dimension (E-service-learning). The digital aspects showed ambivalent results: While students thought digitalization was the window to the world, older citizens thought it was a wall hindering access to the world. The findings of the digital dimension can also be applied to digital learning in general and not necessarily service-learning as a specific learning approach. Study participants stated the advantages and disadvantages of digitalization, e.g., advantages of being flexible in time and space and having possibilities to network with others online, and disadvantages of being less motivated to take part in digital (service-)learning, reduced participation and the invisibility of emotions.

Future research would need to further investigate intergenerational service-learning in terms of cognitive, social, and emotional learning of participants from multiple perspectives of students, teachers and community partners.



08

GLOSSARY



Service-learning

Service-learning connects university learning and community service, and thus contains both a 'service' and a 'learning' experience for students. It can include services in schools, public institutions, non-profit organisations or other community partners. Service-learning is seen as a multi-stakeholder practice between the HEI, the lecturers, students, and community partners that brings benefits for all sides (Rutti et al., 2016). Service-learning is a form of applied coursework that connects theory and practice by allowing students to participate in a service that meets community needs and to reflect on the experience in class and to gain an enhanced sense of civic engagement (Bringle et al., 2006; Furco, 2009). Service-learning thus places its focus on an organized service activity that students provide (service) and on parallel reflection in class (learning), thus combining academic and civic learning.

E-Service-learning

E-service-learning means the implementation of service-learning with a digital component. This means that either the instruction component in class or the service performance in the community takes place online (offsite) (Waldner et al., 2012).

“Service-learning is the various pedagogies that link community service and academic study”.

(Ehrlich, 1996).

Intergenerational service-learning

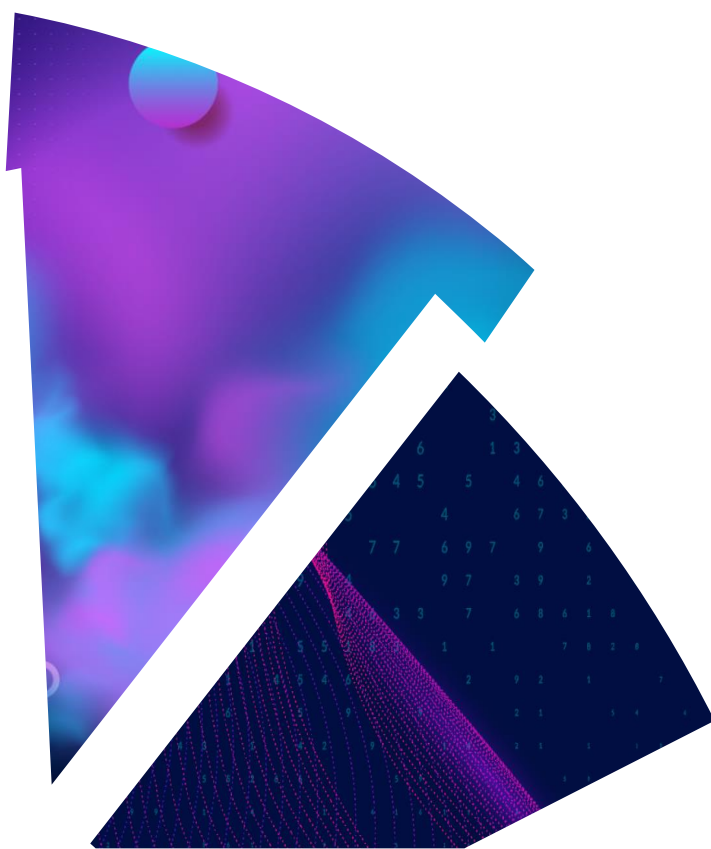
Intergenerational service-learning means the implementation of service-learning with an intergenerational component, such as between younger students and older citizens in a community, between (older) lecturers and (younger) students, or within age-heterogeneous student groups.

Chronological age

Chronological age is viewed as the time that elapses between a person's birth and the phenomenon under study (Séguy et al., 2017). Usually, age cohorts are grouped by demographers into 10-year intervals.

Biological age

Biological age is a measure of the time between birth and the phenomenon under study. It varies considerably across individuals, however, as it is based on biological growth indicators (i.e. children and adolescents). It may be strongly affected by individual living conditions. For example, within just a few generations, the mean age at “puberty” has decreased in response to recent improvements in diet, hygiene and medical care starting already at the age of 11 years, while the “retirement” age has increased to 65 years for both men and women depending on the country of residence. People develop in different ways, so some 11-year olds may not be in puberty yet, while others are (Séguy et al., 2017).





Social age

Social age is a reflection of the place occupied by an individual at a particular point in time within the society to which he/she belongs. People belong to a generation and are thus connected to society through their age. Through participating in common crises or historical events, generations become socio-historic units (Steffens, 2011).

Generation

A generation refers to ranked descent within a lineage, usually within families, such as mothers and daughters, grandmothers and granddaughters, great-grandmothers, etc. Such lineage descent is used to mark the passage of time (see chronological age). A generation can also be viewed as a social unit at the forefront of social change (see social age).

Intergenerational solidarity

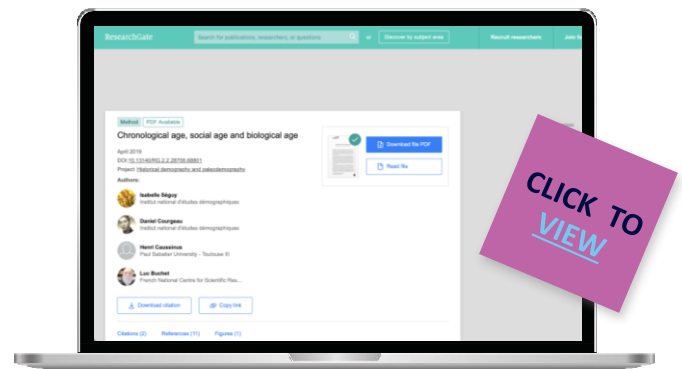
Intergenerational solidarity means social cohesion between generations. The opposite of solidarity might be conflict. Conflict is the absence of solidarity, while conflict and solidarity can coexist. Conflict can occur between the generations on both the macrosocial level (such as conflict between youth and age), or at the microsocal level (such as between fathers and sons). Solidarity and conflict are both difficult to measure and conceptualize (Bengtson & Oyama, 2007).

Intergenerational learning

Intergenerational learning means that people of all ages learn together and from each other, classically within families where knowledge is shared among the generations, however it is also seen as being facilitated with wider social groups outside the family. The basic condition for intergenerational learning is that both sides are open to learn from each other. Therefore, mutual respect and the reflection of generation-specific world views and attitudes are prerequisites for intergenerational learning (Sorgalla, 2015).

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09

ANNEX



Questions

Introduction:

In the context of our research project, we understand Service-learning as a combination of civic engagement (students perform a service in the community) and the training of professional, methodological and social skills (learning) of students through this civic engagement. It is seen as a multi-stakeholder practice between the HEI, the lecturers, students, and community partners that brings benefits for all sides.

- How does this definition of Service-learning fit with your activities?
- How would you describe your experiences with Service-learning?

Example of Service-learning in HEIs

- Can you please give a concrete example of how you are involved in Service-learning courses or activities?
- Can you describe the example in detail: Who is involved? What is the objective? Which activities take place?

Intergenerational component of Service-learning

In our project we want to investigate how Service-learning works between individuals of different generations and what it means when different generations learn together.

- Have you had to deal with other generations older or younger than you within the Service-learning process and how was this experience for you? Please describe your experiences.
- What was easy and what was challenging working with an older or younger person?
- What made you different and in what areas did you have the same opinion or attitude?
- What did you learn from each other? What did you learn from the other person? What do you think the other person might have learned from you?

Digital component of Service-learning

What we also want to look at is how Service-learning has moved into a digital space and what potentials and barriers have arisen in the implementation of Service-learning with digital tools.

- Do you have experiences with Service-learning in the digital sector? Did you use digital tools for the Service-learning activities? Please describe the situation(s) when and why you used digital tools for Service-learning.
- How do you think digital tools can expand the possibilities of Service-learning?
- What difficulties do you see in using digital tools for Service-learning activities?

Tandem teaching (only to be asked if tandem teaching is part of the Service-learning course)











Another question we ask within the project is how tandem teaching can contribute to Service-learning.





- Have you had a partner in any of your previous Service-learning activities? How did you share tasks?
- If you taught together with the other person, what were the advantages of tandem teaching?
- What were the disadvantages of tandem teaching?

Conclusion








- Would you like to take part in a/the Service-learning course again? Please explain why or why not.
- What lessons have you learned? If you were to repeat this experience, what would you do differently?
- Is there anything else you would like to add or say about the topic?

Overview of qualitative interviews about case studies included in the study

No	CASE STUDY TITLE	COUNTRY	DATE	DURATION	GENDER	AGE	POSITION I.E. STUDENT, LECTURER, PROGRAMME COORDINATOR	ON-SITE/ ONLINE	LANGUAGE OF INTERVIEW
1	Intergenerational service-learning with refugees@UniClub		08.07.2022	58min	m	30	student	on-site	de
2	Service-learning with "Jugend am Werk" in Graz		08.07.2022	64min	f	39	student	online	de
3	Austrian Railways Sustainability Challenge		25.07.2022	46min	m	23	student	online	de
4	Siemens CO2 Reduction Sustainability Challenge		19.07.2022	60min	f	26	student	online	de
5	Siemens Carsharing Sustainability Challenge		18.07.2022	74min	f	25	student	online	de
6	Service-learning in multigenerational housing in Hessen		27.07.2022	31 min	m	57	programme coordinator	online	de
7	Service-learning between a school and a nursing home in La Rioja		15.06.2022	37 min	m f f	41 94 11	project coordinator elderly student young student	online	es
8	Intergenerational service-learning in physical education in Castellón de la Plana		13.07.2022	18 min	m	56	project coordinator	online	es
9	Service-learning as part of social pedagogy with the City Council in Valladolid		09.07.2022	41 min	m f	26 53	project coordinator student	online	es
10	Service-learning with pre-service teachers in a remote municipality in Mora		13.09.2022	40min	f	26	student at the teacher work	online	se

No	CASE STUDY TITLE	COUNTRY	DATE	DURATION	GENDER	AGE	POSITION I.E. STUDENT, LECTURER, PROGRAMME COORDINATOR	ON-SITE/ ONLINE	LANGUAGE OF INTERVIEW
11	Service-learning in the Ears to the Soul Programme with lonely people		30.08.2022	65 min	f	---	project coordinator	online	en
12	Designing didactic concepts for art talks at the museum in Kassel		29.08.2022	44 min	f	---	programme coordinator	online	de
13	Intergenerational service-learning in Film Studies		27.07.2022	57min	f	28	student	online	de
14	Culture Course – Volunteer Matching Mainz		02.08.2022	24 min	f	31	project assistant	online	de

Overview of qualitative interviews about interesting case studies excluded from the current study

No	CASE STUDY TITLE	COUNTRY	DATE	DURATION	GENDER	AGE	POSITION I.E. STUDENT, LECTURER, PROGRAMME COORDINATOR	ON-SITE/ ONLINE	LANGUAGE OF INTERVIEW
15	Learning. Commitment. Responsibility.		29.07.2022	61min	m	22	student	online	de
16	Intergenerational learning involving the Senior Study programme 50+		28.07.2022	53 min	m f	44 30	programme coordinator Programme coordinator	online	de
17	Applied project work in Krems		18.07.2022	57min	f	32	programme coordinator	online	de
18	DCU Intergenerational Learning Programme		27.09.2022	36 min	f	---	researcher and lecturer	online	en
19	121digital		03.08.2022	21 min	f	---	student	online	en
20	Intergenerational fieldwork for students of Social Work		12.09.2022	14min	f	62	social worker	online	se
21	Gli Stagisti e-Service-Learning project		13.09.2022	49 min	f	---	project coordinator	online	en



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