eWBL – Making work-based learning work in an online environment

SYNTHESIS REPORT

10/06/2023

Exploring the challenges met and the alternatives found by WBL providers across Europe in their shift from WBL to eWBL.

Prepared by Fondazione Giacomo Brodolini

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PROJECT PARTNERS

university of groningen

Università Ca'Foscari Venezia

Fondazione Giacomo Brodolini

Univerza v Ljubljani

momentum [educate + innovate]

FH MÜNSTER University of Applied Sciences

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Introduction

The importance of work-based learning (WBL) in developing work-ready graduates has been documented by several EU-funded projects such as HAPHE (2016), WBLIC (2016), and WEXHE (2020). WBL is a powerful pedagogy to foster graduate work readiness because it is embedded in authentic work environments. As work is increasingly delivered remotely, a new and digital form of WBL has emerged recently – this is what this project calls “eWBL” which is digital work-based learning.

The main aim of the project is to upskill educators in higher education (HE) (lecturers, trainers, and administrative staff) on how to design and deliver high-quality eWBL. To reach this goal, the project will explore how 25 high-quality WBL providers across Europe have dealt with the pedagogical and technological challenges associated with the transition from WBL to eWBL and the solutions they have devised. The investigation will result in frameworks and replicable models, a toolkit, open educational resources (OERs), capacity-building activities, and multiplier events that will help train those involved in WBL provision in HE.

We aim to boost the work readiness and employability of graduates. The project will specifically focus on how work-based learning competencies could be fostered in the absence of a physical environment. As the work environment is increasingly shifting to online and hybrid formats, ways of making work-based learning effective in this new environment have become an urgent need of educators across the EU. The project addresses this specific need by developing frameworks, tools, and guidelines that educators in HE (lecturers, trainers, and administrative staff) could use to deliver high-quality eWBL.

More information about the project, together with updates and materials, can be found at https://www.ewbl-project.com

About this document

The first step to achieving the project aim was to collect and analyze data to create the 25 case studies that serve as our primary data source. Each project consortium member (FH Münster in Germany, Momentum in Ireland, the University of Ljubljana in Slovenia, Fondazione Giacomo Brodolini and University of Venice in Italy, and The University of Groningen in the Netherlands) was responsible for designing five cases. This Synthesis Report offers an overview of the 27 case studies produced during the research.

The document is divided into seven chapters. In chapter one, we offer a comparative view of the WBL scenario in the five studied countries based on desk research and results from the Erasmus+ WEXHE Project (WEXHE, 2020). In chapter two, we give an overview of how WBL was delivered before the COVID-19 pandemic when it was delivered completely “offline”. In chapter three, we explore how the parties involved (companies and higher education institutions (HEIs) implemented eWBL. In chapter four, we investigate the implications of this transition on expected WBL learning outcomes: soft skills development, acquisition of practical experience, networking, and the understanding of the company/workplace culture. Chapter five discusses the main drivers and challenges associated with remote WBL, while chapter six details the solution and pedagogical innovations introduced by companies and HEIs. Finally, chapter seven explores the long-term implication of eWBL for the studied companies, students, and HEIs featured in the case studies.

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METHODOLOGY

This synthesis report summarises the findings of the national reports of the five participant countries and the 27 cases collected during the research. The first step in creating them was to identify an extensive list of potential cases. We spent one month doing this through desk research, reviewing previous contacts from partners' networks, the lead researcher, and indications from partners Universities career services. The preliminary list included 34 potential cases. From this list, we selected 27 to be expanded into full cases.

The main selection criteria were the diversity of disciplinary areas and HEIs providing them, the sectors in which students could undertake training, and the variety of eWBL programs offered. After identifying the 27 most promising cases, we spent approximately one-month contacting stakeholders to arrange interviews. The list of stakeholders included trainers in HE, trainers in the organisations, and students or alumni. The next two months were dedicated to data collection. The interview questions were developed by the consortium and essentially covered: How WBL was provided before COVID-19, the challenges encountered in shifting to eWBL, and the alternatives or solutions found in response. The interviews were recorded and transcribed for analysis. All interviews were conducted in each country's official language. In total, 86 stakeholders were interviewed: 27 representatives of HEIs, 27 internship supervisors at the companies, and 32 students or alumni.

INTERVIEWS SUMMARY TABLE					
COUNTRY	TOTAL CASES	HEI'S SUPERVISOR | CAREER SERVICE REPRESENTATIVE	COMPANY'S REPRESENTATIVE	STUDENTS OR ALUMNI	TOTAL STAKEHOLDERS
Germany	6	6	5	8	19
Italy	6	6	6	8	20
Ireland	5	5	5	5	15
Slovenia	5	5	5	5	15
The Netherlands	5	5	6	6	17
TOTAL	27	27	27	32	86

The data analysis adheres to Miles et al. (2014) following an explanatory stance using analytic progression. From respondents' raw data, we extracted the most relevant concepts. We then grouped these concepts according to their contribution to the dimensions we wanted to investigate: (i) How WBL was provided before COVID-19, (ii) the challenges encountered in shifting to eWBL, including the implications on WBL learning outcomes (soft skills, practical experience, networking, and workplace culture), and (iii) the alternatives/solutions found. The result of this analytical process is the twenty-seven case studies that comprise the core data of this Synthesis Report.

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Summary

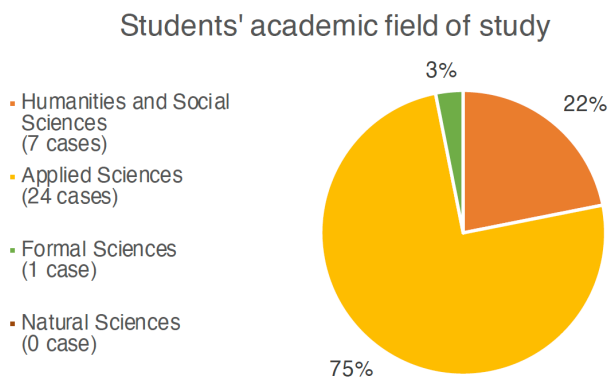
This report aims to synthesize the findings of the case studies showing how the WBL to eWBL transition was accomplished. The document intends to indicate the best practices observed, highlight the solutions proposed by companies and HEIs to minimize the challenges faced by this training model, and thus broaden the discussion on the topic and raise awareness of the benefits that this modality can bring to the workforce's development.

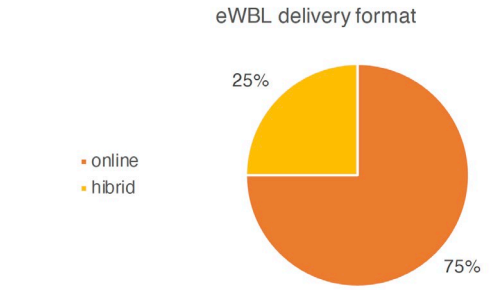
Under decidedly non-ideal conditions and with the need for companies to adapt quickly, these case studies address both the difficulties encountered in the process, the solutions found, and the impact of this change on the trainees' skills development.

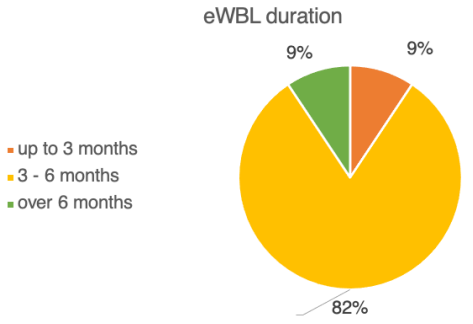
In total, the project conducted 27 case studies and interviewed 32 students. Most internships lasted between 3 and 6 months, were held online, and concentrated in applied sciences fields. One probable reason for that can be explained due to the long history of collaboration between universities of applied sciences and the labour market, as pointed out in the following chapters. However, nowadays, we see the phenomenon emerging and gaining momentum in research universities also, which can offer a new perspective for students and companies.

What is clear from the research is that eWBL is not a homogeneous solution, and it does not apply to all types of trainees. A successful eWBL implementation will require the assessment of trainees' profiles best suited to this program and a clear definition of the objectives to be achieved at the end of the process adapted to each profile.

In any case, concerning the impacts that eWBL has brought to work/life balance and the skills developed, or the change of mindset regarding the topic, eWBL showed this is a road with no return. Therefore, host companies and HEIs need to adapt to allow trainees more flexibility with the training model they prefer to follow, thus being able to retain and attract top talent.







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1. Background

WBL CONTEXT IN EUROPE

In recent years, the purely theoretical academic curriculum is giving way to new strategies that incorporate the use of workplace knowledge to achieve a broader range of educational objectives (Nottingham, 2016; Overton and Lemanski, 2016). Work-based learning (WBL) is defined, according to WEXHE (2019), as: "an educational strategy that provides students with real-life work experiences to apply academic knowledge and understanding, as well as subject-related and generic skills and competencies to develop employability skills and competencies."

Although not yet consistent throughout European countries, this pedagogical structure has grown extensively in higher education institutions (HEIs) around Europe in recent years. We summarise the main delivery types and their particularities below.

- **The Netherlands.** WBL can be understood both as an integration between Higher Education (HE) and the world of work or as lifelong learning. Previously, it was more frequent in universities of applied sciences (business, engineering), where a long history of collaboration with employers exists. However, nowadays, we see the phenomenon emerging and gaining momentum in research universities, despite academic resistance to the WBL's proximity to the market, which could compromise academic integrity. WBL is practically a mandatory educational tool supported by national legislation.

- **Ireland.** WBL involves the provision of a pathway to integrate higher-level education. It is an integral part of students' studies in all disciplines. However, with the many advances in technology in recent years and many organisations turning to remote working, eWBL is becoming a more popular alternative that fits the working style of many organisations. Instead of engaging with WBL as part of their course, students can now engage with eWBL as a new alternative.

- **Slovenia**. WBL carries strong historical ties between universities and industry. Practical training in a work environment is a mandatory component of professional programs (post-secondary professional short cycle and non-university programs at the tertiary level) and optional for university programs, being included in over half of university degree programs already. It occurs most frequently in health care, civil engineering and geodesy, social work, sport, architecture, management, and veterinary medicine disciplines.

- **Italy.** HEIs still have a very traditional approach to apprenticeships. Although WBL has gained popularity recently, it is still associated with more superficial modalities of collaboration, such as short-term placements, rather than complex ones, such as dual education. With the implementation of the Bologna Process in 1999, the Ministry of University established that internships had to become part of an educational methodology to familiarise trainees with the labour market and improve their employability, making them compulsory during courses of study. Today, we still see substantial heterogeneity in the Italian higher education system, both in the size of institutions and in geographic location, with activities carried out by HEIs that go beyond teaching and research functions mostly carried out by medium and large universities located in the north of the country (ANVUR, 2016).

- **Germany**. The German educational system is characterised by a strong focus on using the workplace as an environment for learning. As a result, unique types of WBL, such as apprenticeships and dual

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study programs, emerged in Germany over the last decades. Still, internships are prevalent in Germany (Perusso, 2017).

OFFERED PROGRAMS

Regarding the types of programs offered, despite some variations due to local peculiarities, and except for some specific modalities (such as dual study programs in Germany), programs develop within similar dynamics that we seek to synthesize below.

In general, the experience can occur in public and private employers, is mainly promoted by job centres, universities, schools, accredited career guidance and training centers, and can be divided into the following macro-types:

- **A.1 The vocational education and training system (VET).** Consists of on-the-job training in a company combined with theoretical education in so-called vocational schools. After a few years, graduates receive a nationally recognised vocational certificate. Aimed at students at the upper secondary level, VET is the most traditional type of WBL in Germany. (Busemeyer and Trampusch, 2012).

- **A.2 - Dual study programs**. It combines traditional vocational training with university education. In this way, vocational academies, cooperative universities, and universities of applied sciences provide theoretical knowledge to students, while companies provide on-the-job training (Graf, 2015). Dual study programs are characterised by a high degree of flexibility, leading to different deliveries (Waldhausen and Werner, 2005). For example, dual study programs integrate an initial vocational education and training certificate, integrating vocational practice, integrating an occupation, and accompanying an occupation. All deliveries are characterised by a university degree and work experience in a company for three to four years (Kupfer and Mucke, 2010). Dual study programs are usually initiated by a company in cooperation with a university (Dessinger, 2000), while the state acts as a working conditions regulator (Graf, 2015). Regarding subjects, most dual study programs are offered in engineering sciences, computer science, and business sciences (Hesser and Langfeldt, 2016).

- **B - Traditional internship.** This is a common and well-known type of WBL in most studied countries, offering students the opportunity to work in a company for a fixed time. Usually, students work for about 3 to 6 months in a company or organisation, although in some countries, its duration can vary. In Germany, it can last from one day to a whole year while, in Ireland, it usually takes place in the third year of undergraduate studies for a variable number of weeks, but usually not less than 12. In Italy, internships comprise compulsory activities and recognise the training hours as CFU (formative university credits, ECTS), contributing to degree acquisition. On the premises of these internships, students from these internship providers carry out a range of activities related to their subject area. Good placements are marked by strong support from the organisation while they perform relevant tasks and can work on their personal development.

- **C.1 Placement programs (traineeships).** These programs offer a higher level of integration between theory and practice, are usually customised to the needs of companies, and help students develop professionally relevant skills. The HEI usually assists trainees in finding a placement and coordinates the placement content and feedback mechanisms. In Germany, where it is a common form of WBL, it includes job rotation, lasting approximately 17 months and often guaranteeing a permanent contract. It is paid, increases international opportunities for participants, and usually offers special courses and training. In Slovenia, it is mandatory by law in some professional sectors and fields and lasts for a maximum of one year.

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- **C.2 Project-based learning.** Students spend time working for a company, as in the traditional work placement, but instead of fulfilling daily tasks, they work on specific, predefined projects. The advantage of this modality is the direct link established between theory (learned at HEI) and practice (carried out in the company) since the project activities correspond closely to the module learning outcomes. This type of WBL is very common in hard-to-apply subject areas (e.g., engineering).

- **D – Entrepreneurship.** Entrepreneurship education is primarily taught at universities in the business and economics fields. The need for these skills should be perceived as a path to broader horizons and provide students with the knowledge needed to start a successful professional career. According to Dezelan et al. (2018), young people are increasingly pursuing the entrepreneurship path because of their desire for independence, better development of their own potential, and achievement of goals that are not feasible in a regular job. Activities related to entrepreneurship education and training can be divided into three types: (1) promoting entrepreneurship and motivating young people to be entrepreneurial; (2) entrepreneurship education and training and mentoring; (3) support mechanisms for starting businesses and adapting to and entering the business world and expanding into foreign markets. Typically, program providers organise promotional events and workshops, and work one-on-one with startups on business creation, testing and developing ideas, developing strategies and connections, raising funds and investments, and other activities. Entrepreneurial education and its promotion are part of formal education programs to some degree in the form of study subjects and extracurricular circles. The inclusion of such activities at the university level varies.

THE LABOUR MARKET AND ACADEMIA'S PERCEPTION

The data shows that the market is mostly satisfied with the WBL offering good employment prospects for students coming out of training. The students also consider it a relevant practice in their training, although show reservations about the supervision and preparation offered by HEIs and companies in some cases, as we will detail in the following chapters.

Finally, with the restrictions of physical distance during the pandemic forcing the migration of WBL to an online mode, we could witness a great effort by HEIs to present eWBL as a viable option for students, companies, and academia. With the cultural shift that is increasingly strengthening remote work modalities, eWBL has also become a viable training option for students, increasing their possibility of getting jobs in hosting companies after completing the training.

Obviously, this transition is still in its early stages and, as such, presents an enormous potential for development if opportunities are explored in detail and constraints are dealt with in a proactive and integrated manner.

2. WBL pre-COVID19

In general terms, WBL is a strategy that aims to develop students' skills and align them with market needs, increasing their future employability. Lestor and Costley (2010) described work-based learning as any learning that is situated in the workplace or arises directly out of workplace concerns. It is often seen as an internship or work placement that is arranged between an employer, a student, and a HEI as a facilitator for the student to develop transversal skills and experience in the workplace. WBL is becoming more integrated into students' studies in HEIs across all disciplines due to the benefits that WBL gives to students involved, specifically experience and developing skills to become workplace ready. Meanwhile, Garnett (2005) stated WBL is a

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valuable resource in developing employability skills in students, allowing students to take on a more practical, hands-on learning approach in developing skills such as communication and teamwork within the workplace. Finally, Hora et al. (2021) recognized WBL as being a “high-impact” practice that improves student engagement and academic outcomes, which has caused many HEIs to promote engagement or make internships and work experience a mandatory part of student education as it is an essential experience.

From the case studies, we could see that, despite the different modalities and duration, it is indisputable that WBL programs are becoming increasingly common in higher education environment practices. It allows students to develop soft skills and experience in the workplace, exposing them to the workplace's socio-cultural aspects that usually cannot be developed easily in the classroom, such as communication and teamwork, thus increasing their future employability.

In general, regardless of the form of relationship, the program always involves three players: the students, the companies offering the training, and the facilitator of the process, represented by the career services or the WBL program coordinator within the HEIs. The duration of the eWBL is quite variable, depending on the offered training modality, the way the country's educational system is structured, and the student's discipline of study. It can last a few days, weeks, or even one year.

Furthermore, we noticed a great variety in how internships are sought and offered (through agreements and networking between the HEIs and large companies or local players, by the students themselves, with the HEI offering events such as clinics and lectures to better prepare the students). We also noticed a varying level of involvement by the HEIs, sometimes engaged in offering attractive internship opportunities, while at others, having a more bureaucratic and operational role. Usually, once the agreement was established, the students were accompanied by a mentor within the host company, responsible for the trainee's orientation. Sometimes this professional would also evaluate the student at the end of the training, but it was not always the same person.

On the HEI side, the students were usually accompanied by a career service officer, who oversaw the program (supervising the organisation, administration, quality assurance, and communication with the work environment). Sometimes they also had an academic supervisor who helped with the internship objectives definition and program design.

Regarding the information available to the students before and during the training, we noticed a wide range of differences. Some students report not receiving much information about the company's organisational culture and internship goals. On the other side, for most students, the HEIs offered a range of follow-up services, such as websites with all required info, feedback sessions, events such as career days, job hunting workshops, CV advice services, and specific preparatory training such as interview training, etc. What is noticeable is the positive correlation between the increase in information provided by HEIs and host companies during the process and the increase in students' satisfaction, safety, and feelings of integration with the program; definitely a point to be pursued by all.

The student's onboarding process took place in person, as well as the regular feedback and mentoring meetings with the companies' managers. The follow-up meetings with the HEIs often took place remotely (calls, video calls), while other times comprised supervision visits to the intern's workplace. At the end of the course, students usually wrote a report to evaluate and measure their experience. Despite some variations in these dynamics, one case stands out substantially. Dutch case number 04 describes an evaluation process composed of 4 distinct stages, each with specific objectives and feedback. It deserves special attention as it might indicate an interesting methodological path to follow to allow the correction of the students' evolution during the training process.

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It is noticeable that there was generally no recognition of remote internships, with the vast majority being face-to-face opportunities, even in cases where companies already had established remote work dynamics among their employees. Respondents report that there were few cases of hybrid or remote internships pre-Covid, even though they were allowed, often due to prejudice or mistrust from academics and companies regarding the eWBL benefits. In the case of Italy, for example, HEIs applied outstanding effort in convincing internship academic supervisors to change education credits granting criteria considering the specifics of the remote internship. Also, HEIs' efforts to counteract the existing bias against online placements required some special measures such as netiquette and videoconference software classes' inclusion in students' preparatory courses, for instance. In general, even though the HEIs had remote follow-up processes and dynamics already established, there was an impressive scale-up in online activity at the beginning of the pandemic, representing an overload of work for the placement team.

3. eWBL implementation

The eWBL implementation challenge enabled the application of different approaches according to the HEIs, the companies' level of digitalisation, and the tutors' and interns' initiatives.

Overall, the WBL to eWBL migration process occurred without much strategic planning, largely due to the urgency of the pandemic. Even among HEIs that already offered the possibility of remote internships and companies that already worked remotely, the scale-up in online activity at the beginning of the pandemic undeniably represented an overload for the placement teams.

HEIS

At first, most HEIs were focused on enabling online internships, carrying out a variety of activities as challenges arose. Among the various actions for the placement centres, we can cite: the search for internships for all students, the adaptation of programs to follow health guidelines and travel restrictions, advocacy for the benefits of the eWBL to teachers, companies, and students, negotiation of placement coordinators with companies and students regarding their preference and willingness to migrate to eWBL, assistance to adapt the courses syllabus' and internship tasks to the online environment, renegotiation of interns' insurance coverage, help teachers to re-evaluate the validation criteria of ETC credits or design complementary activities to allow the trainees graduate in the case of insufficient credits.

As mentioned several times by the respondents, despite the numerous advantages, a point of attention in the eWBL implementation is the guarantee of equal student accessibility. In some cases, at the beginning of the transition, the students who could work with their equipment were able to continue the internship online, as reported in Slovenia. However, those who did not have access to hardware and a fast internet connection had to interrupt their training, which ultimately prevented them from fulfilling the minimum hours required by the program. In these cases, the HEI asked them to include a theoretical chapter in the final internship report to complement their training and fulfill the required credits to graduate. However, it is worth pointing out that this was a palliative solution, and the satisfactory guarantee of working conditions is key for a successful implementation of eWBL.

With the stabilisation of the eWBL processes, socialisation events started to be created, as well as more constant student guidance and follow-up concerning their educational needs and mental and emotional well-being. Some of the developed activities were:

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- "Info-desks" were scheduled to support the trainees who had to carry out their remote placement: the staff underlined the importance of updating the attendance register, netiquette, and the IT tools at their disposal to communicate with the relevant parties.
- Online training courses to develop soft and IT skills before starting the placement.
- Online events with corporate partners (job interview training, recruiting days, company presentations, talks about trends and changes in the labour market, etc.) to better explain the pros and cons of remote working and preparing trainees.
- Trainees follow up via MS Teams or phone. Although this was a common practice pre-COVID-19, there was an increase in the channels available for tutors and students to communicate.
- Career service staff training about remote working requirements.
- In some HEIs, the staff received laptops and headsets to facilitate their communication with students.
- As an isolated case, one HEI offered more in-depth and specific support for students, where onboarding sessions covered topics such as leadership, teamwork in digital environments, and project management tools (Case 4, Germany).

However, it is worth noting that the implementation of these practices was perceived as rather uneven throughout the various cases studied. Some respondents, especially in countries like Germany and Italy (partially), indicated less support, no change in processes, no internships search support, or additional guidance by HEIs, having acted superficially during the transition from WBL to eWBL.

COMPANIES

From the companies' point of view, the internship impacts regarding the transition to remote working varied substantially depending on their level of digitalisation level, both in terms of equipment and employees' digital culture. When dynamics, equipment, security systems and sensitive data protection, and management processes existed and were already defined, the transition from in-person to remote work ran smoothly with an adaptation period substantially shorter than the companies that had to draw up new processes from scratch. In addition, companies taking their first steps in the digitalisation process need a careful assessment (and improvement) of employees' netiquette skills. That would avoid creating additional socialising difficulties beyond the ones trainees already face due to physical distancing.

Most of the time, onboarding sessions were done remotely. In exceptional cases when the sanitary legislation allowed, the induction plan was done physically for a duration that varied from 1 or 2 days to up to 2 weeks. However, the absolute majority of respondents believe that the face-to-face process is smoother because of the possibility of more direct communication of additional instructions, clarification of doubts, adjustment of equipment and software installation, and meeting with the work team. In some companies in Ireland and The Netherlands, there was an alignment between HR and hiring managers to ensure that students received the necessary hardware, software, and training courses before the beginning of the internship with basic guidelines on how to work remotely.

Work dynamics organisation, program goals clarity, and student mentoring also require attention. Vriens et al. (2013) suggest that for an effective virtual internship there needs to be effective information technologies, should include a face-to-face component, and needs to be well-organised and planned. eWBL design and delivery must encompass all these to be as effective as possible in developing students' skills. In addition, when observing the importance of the internships' design, Ruggiero and Boehm (2016) found that the principles of effective design of face-to-face internships were particularly important for virtual internships. These principles included the need to articulate learning outcomes prior to the creation of the internship, pre-internship meetings with those involved to identify performance goals, and facilitation of peer communication among students. Ruggiero and Boehm (2016) found that explicit and clear communication is required between

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clients, mentors, and interns during the virtual internship to lead to secure attachments and internships that ended in completed projects that met all of the criteria.

In general, the above points were corroborated by the case studies. There was a clear demand for greater dedication from the companies' mentors in accompanying the students, better planning of activities, and more effective communication, which, when done well, contributed positively to increasing student satisfaction, feelings of welcome, and skills development. Among the various quotes from the respondents, we see a correlation between remote work with concepts of discipline, organisation, better detailing of processes, clarity in evaluation criteria, and the more constant presence of supervisors.

Among the main and most frequent dynamics in the day-to-day work, which will be better detailed in Chapter 6 – "*Developed Solutions*", we can mention:

- Follow-up meetings were a constant in all companies, varying their purpose and intensity, participation of different teams or stakeholders, done in a group or individually with the supervisor. Among them, we can point to daily briefing sessions to establish daily tasks and touch base with employees, weekly planning or socialisation sessions, and strategic follow-up monthly sessions. In general, the distance and, at the same time, the regular students monitoring allowed a certain independence that, after the shock and stress of the initial adaptation phase, was perceived in a very positive way. The trainees were able to reconcile their work with their academic and personal lives and work in times when they had greater concentration. On the other side, the HEIs and companies noted an increase in soft skills such as problem-solving and independence. The task management took place in different ways, from Excel spreadsheets to project management software, except for one case that used software (Clockify.me) to track interns' work hours and tasks (Germany).
- Social activities such as happy hours, virtual cafes, etc. Although, in this case, after the initial enthusiasm, it was often seen as a top-down initiative by the companies or not very spontaneous, losing a lot of employee engagement over time.
- Assigning mentors, work buddies, and other ways to foster proximity, communication, and integration of trainees seeking to overcome the barrier of physical distance. Corroborating this intent, faculty mentors of Social Work in Slovenia did research evaluating eWBL considering Covid-19 and the findings from the study also indicate that mentor support (from the social work faculty and practicum sites) is critical for students to overcome challenges in practice because it provides them with the knowledge of how to respond to challenges (Kodele et al. 2021)
- When allowed, hybrid work on a variable rotation scheme of face-to-face vs. home office days.

Despite all these initiatives, some respondents in HEIs and companies still have reservations about online internships due to their low possibility of fostering sociability. The lack of personal contact was also perceived by HEIs as negatively impacting students' teamwork and networking skills development. On the other hand, most students do not perceive online work as impacting negatively on their learning. An assumption could be because of the benefits online work offers as a counterpoint or perhaps because of the lack of extensive professional experience among students, which hinders a deeper comparison. In addition, the volume of virtual meetings was cited by some students as too intensive, being a reason for students' fatigue, and interfering with their anxiety and levels of well-being.

As a positive difference, it was noted that more people were willing to explore more technology and improve their learning styles. The community was strengthened by sharing best practices and experiences and learning from each other. In addition, the online internship made meeting coordination less complex, allowing efficient discussions and the participation of geographically distant teams. Also, eWBL enabled interns to participate in more strategic meetings (such as political decisions and meetings of other business units or

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countries) that in a face-to-face context would be difficult to attend, thus broadening their repertoire of professional experiences.

Some companies and HEIs make it clear that not all activities and student profiles are suitable for eWBL. Activities that require direct contact with customers (tourism sector) and physiological experiments (measuring emotions, pressure, nerves) when online assessment may be misleading, and students with specific aptitudes and profiles (such as greater introversion or difficulty with self-management) may not be the most suitable for eWBL. To get around this, some companies adjusted the task to the specificities of remote work, including more theoretical work, activities requiring concentration, or allowing transversal soft skills development. Activities requiring less direct supervision were prioritised, in comparison with the ones demanding more intense training, such as in customer service (ITA case).

Regarding the technological adaptation issues, a large number of existing remote work tools and platforms adapted very well to eWBL. Software like Zoom, Slack, MS Teams, Blue Jeans, Microsoft Dynamics, Dropbox, Google suite, Outlook, SAP, and WhatsApp were used extensively. In some cases, we noted the use of e-learning platforms, either in-house or outsourced. In one specific case (Ireland – Case 5), the host startup used a virtual office environment at metaverse where the trainee had to be present regularly.

Finally, at the end of the training program, HEIs conducted evaluations consisting of a self-evaluation report where students evaluated the company and the performed tasks at the beginning and end of the course and gave a personal grade. In general, according to the collected data, the eWBL assessment process did not change to absorb and evaluate the competencies development evolution related to the digital environment, which is a point that should be better measured in the future.

4. Impact of eWBL on learning outcomes

It was clear from the collected data, that the useful professional competencies development that eWBL leverages, but at the same time, how the modality could represent a major obstacle to the intern's integration and corporate culture acquisition, a relevant point when dealing with first professional experiences. Thus, a hybrid work model that can balance the various needs and advantages of both work models (remote and face-to-face) should be a goal to be pursued.

In general, productivity during remote working was not impaired, some having witnessed even an increase. As students were not frequently interrupted, they could achieve greater concentration. In addition, the possibility to do their tasks when they felt more productive and reconcile their work with personal and academic agendas optimised students' time and mental energy. In addition, clear and structured communication and the supervisor's availability for additional guidance and feedback showed a positive correlation with trainees' increased productivity. Thus, one suspects that physical distance is not an insurmountable problem if the company and HEIs find ways to make themselves present.

Finally, some interviews also reinforced the need for a correct and in-depth behavioural specificities assessment of each trainee and the subsequent best training modality definition (remote, on-site, or hybrid) to increase the possibility of the programs success and the full development of the interns potential. Below, we go into more detail about some specific competencies developed through eWBL.

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4.1 SOFT-SKILLS DEVELOPMENT

As cited by Perusso and Wagenaar (2021), one of the best-documented benefits of WBL is soft skill development. Overall, the data from the cases suggest that online WBL fosters soft skills development, yet a different and more restricted skill set than offline WBL.

In general, the data collected indicates a consensus that eWBL fosters improvement in time management, self-regulation, independent problem-solving, flexibility, leadership, critical and analytical thinking, and corporate etiquette (interactions/communication with senior professionals). Exceptionally, Germany reported in some cases that productivity was negatively impacted by students increased learning and adaptation curve and a lack of proximity to supervisors.

Also, social isolation and forced digital transition developed technology literacy in online tools such as project management software (like Figma and Slack), video conferencing (Zoom), or presentations (PowerPoint) and netiquette skills. In any case, as highlighted in one Italian case study, the exchange between tech-born trainees and senior analogical professionals can create a complementarity that, more than digital upskilling, can benefit the overall culture development and synergy in companies.

Another relevant question is how much eWBL allowed active learning development. Distance has forced companies to be creative in the technical and specific knowledge transmission that, before, could be acquired more intuitively through observation of the day-to-day work. Whether through tailored-developed or outsourced e-learning platforms or modest solutions such as bibliography and reference materials shared on a server, initiatives strongly encouraged interns to create a learning path according to their specific needs and career objectives.

Concerning communication skills, the study shows mixed perceptions among respondents. The data shows an improvement in more formal communication and email writing. Assertive language skills were also naturally developed due to physical distance. Some countries mentioned that eWBL required students to step out of their comfort zone, as they were required to send messages to strangers. In addition, the virtual environment and easiness to book online meetings allowed students to participate in a greater volume of meetings of all kinds of complexity and topics. A switch that naturally allowed students to develop informal conversation, negotiation, and oral presentation skills (albeit in a less spontaneous and more structured way). On the other hand, this same remote environment also hindered learning by the corporate environment observation, reading non-verbal elements of communication such as body language, and skills development such as persuasion. In addition, the lack of public speaking training or being in front of other people often increased students' anxiety once the health restrictions were relaxed and everyone could return to the face-to-face environment.

The big negative point regarding eWBL was the development of skills that depended both on social interaction and collaborative characteristics: teamwork, creativity, and ideation. Also, despite the companies' stimulus in promoting virtual integration activities, most trainees pointed out that the initiative was not enough to form personal bonds.

Finally, some students reported increased procrastination, while others reported increased fatigue and lack of concentration from spending too much time online and too little time with people. It was noted several times that there was an initial enthusiasm for eWBL that waned as the novelty wore off, which created resistance from some students.

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4.2 ACQUISITION OF PRACTICAL EXPERIENCE

Overall, eWBL allowed for the acquisition of practical knowledge. HEIs focused more on strategic and theoretical knowledge, while the professional training programs focused on imparting operational knowledge, allowing trainees to relate both. In addition, one of the cases cited that the fast deployment context of eWBL helped trainees gain skills in crisis management, time management, and adjustments in different situations (flexibility) that they would be less likely to encounter in a face-to-face environment. Still, we will have to assess over time if this was an isolated occurrence due to the fast pace at which the WBL to eWBL migration occurred (i.e., in a more organized eWBL, these competencies won't be too stimulated) or if it will remain as a permanent eWBL impact.

In any case, we can say that the type of practical experience acquired will vary substantially depending on the kind of environment and activities that the trainee must perform. In general, the research revealed that remote working could contribute to developing technical skills that demand dedicated study, reading, and concentration, while presential immersion could contribute to increasing the student's knowledge acquired through observing colleagues:

- Activities with little interaction and activities in front of a computer were less impacted (research, data analysis, political consulting, digital communication). The trainee can do regular work, take responsibility, follow a work schedule, etc.

- Disciplines/professional areas where social interaction is a determinant of the job, online work provided only a partial portrayal of the reality of the profession. This is especially true, for instance, in the hotel and hospitality industry. Government jobs could also suffer the same impact as the absence of witnessing decision-making processes or policies being elaborated is a crucial part of the profession. In social services, where physical contact stimulates connection and empathy and ultimately guarantees service deliveries, or in start-up environments, where agreements often are negotiated during informal occasions, eWBL prevented interns from gaining a substantial part of core field experiences.

A positive point that the eWBL specifically enabled was the interns' participation in other regions, different business units, negotiation, and strategic meetings as listeners/observers due to the easier connection that video conferencing tools allowed. This opportunity contributed to a comprehensive view of the company's processes and daily routine, an extremely favourable experience for their professional development, considering the internship is one of their first interactions with the corporate world.

In addition, many of the placements allowed the trainees to learn to work online through the use of tools, systems, and software widely used in the corporate context, giving interns a competitive advantage compared to other students.

One of the points that HEIs must be attentive to is to expose the trainees to the physical environment during some periods. Otherwise, there is a risk of creating a generation who have not seen a company from the inside. Thus, a common point in the vast majority of the data collected seems to point to some hybrid working model as a potential solution, with the conditions and balance of face-to-face and remote involvement still to be discussed in detail.

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4.3 NETWORKING

Networking was one of the points that seem to have been most affected by eWBL. As we could perceive during interviews, the eWBL still has challenges regarding trainee socialisation. The restricted or non-existent relationships outside the trainee's direct contacts compromise the informal network creation and corporate silos breaking, known as one of the greatest stimuli to innovation in companies.

Informal situations such as coffees and lunches were drastically reduced, limiting the trainees' networking development, which, although existing, became noticeably weaker. Even with companies proactively and creatively proposing integration activities, it was reported as difficult for interns to network outside their business unit or with professionals not related to projects, they were participating in. Moreover, as already mentioned, the lack of a stronger netiquette culture impaired trainees' complete integration. Here, it is worth citing one exception in networking skills development perceived in a positive light during eWBL: when it was related to availability, i.e. when one person unilaterally demanded help from another.

On the positive side, the trainees understood their responsibility to be proactive and to build and maintain a network in adverse situations. They were more active in reaching out to people through means other than the physical. Also, although the physical distance made it difficult to form personal bonds, the digital environment allowed students to be exposed to teams from other business units and sectors or the international community (in the case of research jobs), making it much easier to get noticed for their work. In this case, tools such as LinkedIn, email, and video calls were very well exploited and fundamental. In addition, some companies allowed students to participate in virtual meetings, which probably would not have happened in a face-to-face situation and ultimately helped the students' networking development and expansion.

The fluidity and informality physical environments bring to team building are extremely valued. In the case of remote work implementation, it is fundamental to reinforce the company's communication channels and ability to transmit corporate culture so that trainees feel more welcome. Also, it is fundamental to host regular presential events to create and strengthen social bonds.

4.4 COMPANY/ORGANISATIONAL CULTURE

According to Gray, 2001; Jackson, 2015, an important learning outcome of WBL is the acquisition of "organisational and work culture." That includes first-hand observation of workplace norms, routines and language of a given company and industry. From the data collected, we can say that eWBL can create a barrier for students to absorb the corporate culture because the digital environment hinders informal contact with those involved in the organisation, preventing the observation of people's behaviour and non-verbal communication. The survey also noted that eWBL prevented full acquisition of the work culture in situations where face-to-face interaction is part of the job (hospitality), decisions are built collectively (government area), non-verbal communication assessment is needed (social services), or decisions are made in informal situations (startups). On the positive side, eWBL allowed the development of skills such as discipline, independent problem solving, technology and remote work skills, and self-efficacy. Online meetings helped interns capture the company's level of formality, language, and communication style.

Onboarding and socialisation processes (virtual cafes, employee interaction events, and sharing of organisational values) were important but perceived heterogeneously by students. Some interns saw these opportunities as lacking spontaneity or too forced to be able to communicate a clear picture of the corporate culture, while others perceived them as companies' and employees' real efforts to welcome and adapt to newcomers. Despite the use of online onboarding tools and processes created to overcome the social

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distance challenge, it was clear that the organisational culture's transmission is easier in a physical environment, and it is important to prioritise them whenever possible. Trainees who had the chance to do blended-mode internships highlighted the easiness of understanding the company's routine in detail when in the offices.

Finally, considering the interns' first professional activities and contact with the corporate world, it may be important, whenever possible, to expose them to transversal activities, multiple sectors, and strategic professionals, stimulating them to acquire wider industry knowledge and organisational culture repertoire.

5. Drivers and challenges to eWBL

Certainly, because it is a training modality that gained scale with the pandemic, eWBL still presents challenges to be overcome in order to be widely adopted by HEIs, students, and companies. For the same reasons, its benefits are not yet fully measurable. However, some basic points are already worth considering as a starting point in the adoption of online training:

- ensure that the tasks to be performed by the trainee are appropriate for remote work and that the trainee has an attitudinal profile that allows the correct development of skills.
- ensure a good structure of work processes, a clear division of tasks, and assertive communication that allows efficient remote working.
- stimulate the proximity of supervisors, constant feedback, and the expansion of student communication channels for additional guidance and to solve doubts.
- ensure a good home office structure in a space with privacy, ergonomic conditions, and satisfactory connectivity (internet).

Based on these points, we can list the following drivers and barriers to the adoption of eWBL, divided into structuraldrivers and barriers related to technical and tangible issues and behavioral drivers and barriers related to the attitudes of individuals and institutions in reaction to the migration process from WBL to eWBL itself:

5.1 DRIVERS

5.1.1 STRUCTURAL DRIVERS

Students

- Greater geographic flexibility opening opportunities for students who might not otherwise be able to make the placement.
- Greater flexibility in time management and scheduling, allowing students to work in periods of higher productivity or reconcile the internship with academic and personal activities (a better work-life balance).
- Participation in meetings with geographically distant teams, gaining a greater professional repertoire.
- Less commuting time, fewer interruptions and distractions, and greater concentration generating greater productivity.
- Cost savings (housing rental in large centres and commuting costs)

Companies

- Headquarter cost-savings;

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- The available software in the market, cloud technology, and increased 5G networks are certainly an extra stimuli to remote work.

HEIs

- Easier to organise meetings and transfer knowledge to more people simultaneously.

5.1.2 BEHAVIORAL DRIVERS

Students

- Foster soft skills such as time management, independent thinking, initiative, and high regulation
- Professional experience, soft skills development, remote work, and technological skills, increasing your employability and helping your academic learning.
- Networking (access to an international network due to online events and projects), although at similar levels to the WBL.
- Motivation: students cited they had to work harder to excel in some cases since no one was watching them work. Others said digital environments bring more transparency, as they allow people to stand out for the work done.
- The onboarding and company preparation process can also represent a huge motivator for students to join eWBL. In addition, assigning students to projects instead of just fulfilling tasks can be a great stimulus and engagement.
- HEIs support in the preparation, advising, and interview preparation is fundamental to student motivation and the success of eWBL.
- Innovations - such as FAD (distance learning platform) and e-learning platforms with tailor-made and customised programs, enabling people to upskill at their own pace and allowing not only for corporate culture transmission, mitigating the physical distance, but also enabling trainees to develop specific skills according to their position or career plan needs.

Companies

- Extended talent attraction without geographic limitations.

HEIs

- Government regulation that, in some cases, encouraged while, in others, required migration to eWBL during the pandemic.
- Engagement with organisations offering support, opportunities for peer-to-peer learning, improved knowledge, and professionalism.

5.2 CHALLENGES

5.2.1 STRUCTURAL CHALLENGES

Students

- Technological issues such as lack of equipment and low connectivity (or sharing of data connections with other people) can be a problem, as lack of student privacy or ergonomically unsuitable environments for long-duration work.
- Lack of remuneration was a barrier to student motivation and commitment in some cases.

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- Technical knowledge of online tools and software.
- Loss of access to information (files, library) when they are not yet digital.

Companies

- Lack of tools and systems that ensure sensitive data privacy and protection, cyber security, and remote access.
- The use of several work platforms simultaneously can be a problem. Need to create common, unified archiving protocols and platform use, especially in multinational companies or environments involving multiple stakeholders such as international research and governmental organisations.
- Low digitisation level (and digital culture) in smaller, family-owned companies.

HEIs

- Lack of digital technical literature from employees.
- Lack of definition and adjustment in pre- and post-placement assessment models.

5.2.2 BEHAVIORAL CHALLENGES

Students

- Decreased social interaction, creating low motivation, anxiety, and depression.
- The perception that work is repetitive and routine or too much time online, causing fatigue and lack of concentration.
- The involuntary merger between work and personal time.
- Difficulty absorbing the company culture, which is even more problematic in industries and sectors where social interaction is core.
- Difficulty in soft skills development: creativity and teamwork, networking (especially with people outside the organisation).
- Loss of student's confidence in cases where the program does not follow a well-structured work process, supervisors were not close, the internship objectives were unclear, and communication was not assertive.
- Preventing students from learning in the work environment (by observation), impacting their learning.
- Difficulty for students to perceive the progression of their internship and learning.
- Restricted communication or slower response time to questions or problems, creating uneasiness.
- Flexibility can be a problem for some trainees' profiles because remote work requires discipline and self-organisation.

Companies

- If there is no clear communication, there are greater chances of misunderstanding or mistakes (delays).
- Increased demand generated by trainees' supervision, causing an overload for managers and thus, compromising online internships' viability.
- Social isolation and stress for employees.
- Difficulty in monitoring the evolution of the internships, whether it be activity control or feedback.
- Low socialisation or adherence to socialisation initiatives, negatively impacting the synergy with other departments and representing difficulty in creating relationships. In some cases, there was little employee engagement in these events because they were perceived as too artificial (top-down);
- Acceptance of eWBL by the companies' staff due to the greater need for supervision. This point is especially cited in the German case studies, where there is still no certainty about the effectiveness and necessity of the transition from WBL to eWBL.

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HEIs

- Difficulty in monitoring the stages' evolution, either activity or feedback control.
- Need for cultural change is required on the part of some companies and, especially, the faculty members to increase the awareness of the differences between in-person and remote internships and the consequent advantages of eWBL.

6. Developed solutions

HEIs and companies were forced to adapt quickly to migrate internships to the online modality due to the COVID-19 restrictions, thus, ensuring the program's continuity and new pedagogical approaches needed to be developed and taken up by HEIs and organisations in the eWBL delivery. Some of the innovations were more successful than others in aiding student learning. In addition, some of the innovations that the organisations introduced were organisation-wide, with full-time employees also being involved.

Overall, the data collection shows common solutions across the studied countries, even though with slight local variations. Due to this, the report sought to list each practice, describe them in detail, and include a table comparing the regions where the initiatives were applied.

6.1 PEDAGOGICAL SOLUTIONS

Companies:

A. Orientation and follow-up

A.1 Daily touch base meeting: daily virtual check to distribute and plan tasks and assess students' well-being. It was an opportunity for interns to ask for any assistance with problems

A.2 Weekly briefing meeting: Usually, it takes place at the beginning of the week. It aimed not only to inform interns of their tasks for the week but also to meet colleagues and supervisors and socialise; Meetings often started with a "how was your weekend" conversation. It is not very long (15-30min) and includes a small number of participants.

A.3 Feedback and mentoring meeting: These are often one-on-one meetings between the intern(s) and the placement supervisor. It is used to discuss work output, to give interns feedback, and as an instrument for formal assessment. They typically happen once a week but can vary in frequency depending on the company. Interns and supervisors believe this is a relevant moment to check the intern's mental health, motivation, evolution, and general satisfaction with remote work.

A.4 Mentors: the students were assigned a mentor within the organisation to guide and assist them in the transition to eWBL, giving advice and feedback.

A.5 Tracking of hours with special software. One company used a special software (Clockify.me) to track interns' working hours and tasks.

B. Integration

B.1 Onboarding sessions: There, interns are invited to the company to be welcomed by colleagues and supervisors, visit the company and receive instructions and IT equipment. This welcoming day serves various purposes. It facilitates later communication between employees and interns as people know the face behind the screen. It also facilitates the IT equipment setup and the dissemination of work norms, routines, and culture - it gives interns the feeling that they are working for a real organisation.

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When it was possible to meet physically, companies implemented an employee rotation, allowing the students to join the office environment in welcome sessions for up to 1 or 2 weeks and, after that, started to work remotely.

B.2 Interns meeting (socialising): This is more of a socialisation event where all interns from a given department or firm meet to share their experiences, offer advice or socialise. This meeting could be initially set up by the company, but later interns can take over its organisation.

B.3 Peer works: an initiative where interns always *work in pairs*, sharing similar or the same tasks. According to participants, this alleviates feelings of isolation associated with working from home and allows interns to have someone whom they can contact daily at a personal level (e.g., on WhatsApp).

B.4 Work buddies: a stable contact person outside the interns' project or department to support their familiarisation with the company, e.g., by passing on knowledge, answering doubts, introducing the intern to co-workers, or giving feedback. Another modality of the buddy system was a company where interns also designed special training sessions for other interns. In these training sessions, old interns presented the different departments and functions to new interns.

B.5 Teambuilding: this was one of the initiatives most commonly used by companies to foster employee integration. A variety of remote or in-presence activities were created, such as happy hours, digital lunches, mock interviews, lectures about the jobs of the future, paintball matches, virtual coffee breaks, online games, and virtual Christmas dinners. However, most of those implementations were reported unsuccessful due to employees' non-frequency and non-commitment.

C. Preparation and training

C.1 Briefing meeting (pre-meetings): Before important online meetings, the placement supervisor spent 10-15min explaining to interns the purpose of the given meeting, who is participating, and what attitude and behaviour was expected from interns. That encouraged interns to actively participate in video conferences.

C.2 Training sessions: "Academy", an online academy providing training for interns. The initiative included mandatory parts and extra materials according to the internship duration. The company provided materials or videos explaining each learning category. Students took part in an online IGD Starter Skills course as part of their introduction to the company and had access to the eLearning Academy, which provided online educational courses to all staff.

C.3 Digital skills assessment: Company assessed employees' digital upskilling needs and based on the results, offered digital training courses through the distance learning platform FAD.

C.4 Access to company or outsourced e-learning platform: Learning Platform, allowing employees to access training courses and seminars on several professional areas (foreign languages, HR, administration, insurance, among others)

C.5 Virtual library and reference materials: some companies created virtual libraries on servers like Dropbox to share bibliographies and reference materials, trying to mitigate the social distance impacts on industry-specific knowledge transmission.

D. Communication

D.1 Low barrier approach (communication): The company actively cultivated a culture of low communication barriers between interns and supervisors. That meant interns should be able to easily reach supervisors by phone or instant messaging and were encouraged to contact supervisors whenever relevant questions emerged.

D.2 Company newsletter: the institutional channel was reinforced, informing about ongoing and future projects and alliances, among other initiatives.

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E. Management

E.1 Management model by objectives: Management by objectives approaches instead of by processes model with strict control of hours, developing intern's autonomy.

E.2 Definition of team objectives, instead of only individual goals: A company defined team objectives for the group instead of individual goals only. The strategy helped to stimulate employees' integration and exchange even in a remote environment.

E.3 2-step evaluation process (quality assurance): One company established a stricter protocol for evaluating the work done by the trainees (double-check), where two professionals reviewed the students' production before sending it to the clients.

F. Methodology

F.1 Different approach and the use of online tools for experiments. Transfer of experiments that could not previously be performed outside lab spaces designed with specialised equipment to the online world. Conducting experiments to explore cognitive phenomena with online tools was another innovation that would not have been used or known if the pandemic hadn't occurred. Many different approaches, new learning tools, and apps (Jamboard, Miro, Slido, Mentimeter, Mural), including some protocols, have been implemented.

HEIs:

A. Orientation and follow-up

A.6 Info-desks, were scheduled to support the trainees who had to carry out remote placement: the staff underlined the importance of updating the attendance register, netiquette, and the IT tools at their disposal to communicate with the parties.

A.7 Feedback and mentoring sessions. Students' follow-up by tutors via teams or phone (although this was already a common practice pre-COVID-19).

A.8 Weekly follow-up meetings: pop-in sessions where students could join a virtual call to ask questions regarding their work placement

A.9 4-phase assessment. The work placement was divided into *four stages*. To conclude each phase, students had to deliver assignments. Students received formative feedback on the draft version of each assignment based on specific rubrics. Individual feedback was also given between assignments in Q&A sessions and individual mentoring sessions where work and personal issues were discussed. Finally, students were encouraged to share their feedback outcomes with other students and discuss the problems they faced and how they solved them.

A.10 Anonymous questioning platform (JAM Boards): the HEI introduced Jam Boards online platform where students could ask anonymous questions and clarify doubts

A.11 Communication/info/job portal: a platform where HEIs and students could exchange information. On the portal, students could also find additional orientation regarding their internships, forms to be filled in, and a Job search platform with internship opportunities.

B. Integration

B.5 Teambuilding: some HEIs offered also virtual happy hours

B.6 Trainee meeting: HEIs also organised meetings with different interns, similar to the interns' meeting described in item B.2. Again, the purpose was for them to share their experiences and learn from one another.

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C. Preparation and training

C.6 Modules and preparatory classes: Training courses and onboarding sessions for the interns before starting the placement and taking place remotely. It included tasks to carry out in small groups to develop soft and IT skills or courses on platforms such as LinkedIn Learning. However, it was up to the students to take part in these online courses as often there was no academic requirement.

C.7 Preparatory modules (staff): The staff at some HEIs have also had access to training related to digital tools and remote working.

G. Dissemination

G.1 Online event with corporate partners: Recruiting days, company presentations, etc., to better explain the pros and cons of remote working and prepare trainees.

6.2 TECHNOLOGICAL SOLUTIONS | ISSUES

Companies:

H. Software

H.1 Use of existing remote working tools: project management software like Asana and MS Project

H.2 Specific technical software: shortcut (task distribution), Square space (website), GitHub, Connect (internal company communication platform).

H.3 Use of cloud platforms and storage: GSuit, MS Team, Dropbox.

I. Learning and training

I.1 New learning tools and applications: (Jamboard, Miro, Slido, Mentimeter, Mural)

I.2 Access to the e-learning platform

J. Virtual environments and e-gaming

J.1 Virtual office in Metaverse

J.2 Games platform (forum Chanells) – a special platform based on a gaming tool (forum, Chanells) was created to allow online consultation for social service providers

K. Infrastructure, systems, and connectivity

K.1 Upgrading and integration of IT systems and infrastructure, cybersecurity, remote credentialing, and sensitive data protection

K.2 connectivity (in rural areas or not) or equipment issues

K.3 no IT problems

L. Hardware and Equipment

L.1 Use of own equipment (student)

L.2 Supply of company laptops

L.3 Company provided a channel for students to request laptops, desks, chairs, and headphones.

HEIs:

H. Software

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H.1 Use of existing remote working tools, project management software (*see Technological solutions > Companies*)

H.3 Use of cloud platforms and storage (*see Technological solutions > Companies*)

DEVELOPED SOLUTIONS		COUNTRIES				
		THE NETHERLANDS	IRELAND	GERMANY	SLOVENIA	ITALY
PEDAGOGICAL						
COMPANY						
A.Orientation and follow-up	A.1 Daily touch base meeting					
	A.2 Weekly briefing meeting					
	A.3 Feedback and mentoring meeting					
	A.4 Mentors					
	A.5 Tracking of hours with special software					
B. Integration	B.1 Onboarding sessions					
	B.2 Interns meeting (socializing)					
	B.3 Peer works					
	B.4 Work buddies					
	B.5 Teambuilding					
C. Preparation and training	C.1 Briefing meeting (pre-meetings)					
	C.2 Training sessions					
	C.3 Digital skills assessment					
	C.4 Access to company or outsourced e-learning platform					
	C.5 Virtual library and reference materials					
D. Communication	D.1 Low barrier approach (communication)					
	D.2 Company newsletter					
E. Management	E.1 Management model by objectives					
	E.2 Definition of team objectives, instead of only individual goals					
	E.3 2-step evaluation process (quality assurance)					
F. Methodology	F.1 Different approach and the use of online tools for experiments					
HEIs						
A. Orientation and follow-up	A.6 Info-desk"					
	A.7 Feedback and mentoring sessions					
	A.8 Weekly follow-up meetings					
	A.9 4-phase assessment					
	A.10 Anonymous questioning platform (JAM Boards)					
	A.11 Communication / info / job portal					
B. Integration	B.5 Teambuilding (happy hours)					
	B.6 Trainee meeting					
C. Preparation and training	C.6 Modules and preparatory classes					
	C.7 Preparatory modules (staff)					
G. Dissemination	G.1 Online event with corporate partners					
TECHNOLOGICAL						
COMPANY						
H. Software	H.1 Use of existing remote working tools					
	H.2 Specific technical software					
	H.3 Use of cloud platforms and storage					
I. Learning and training	I.1 New learning tools and applications					
	I.2 Access to the e-learning platform					
J. Virtual environments and e-gaming	J.1 Virtual office in Metaverse					
	J.2 Games platform (forum Chanells)					
K. Infrastructure, systems, and connectivity	K.1 Upgrading and integration of IT systems and infrastructure, cybersecurity, remote credentialing, and sensitive data protection					
	K.2 connectivity (in rural areas or not) or equipment issues					
	K.3 no IT problems					
L. Hardware and Equipment	L.1 Use of own equipment (student)					
	L.2 supply of company laptop					
	L.3 company provided a channel for students to request laptops, desks, chairs, and headphones					
HEIs						
H. Software	H.1 Use of existing remote working tools. project management software (see Technological solutions > Companies)					
	H.3 Use of cloud platforms and storage (see Technological solutions > Companies)					

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7. Long-term implications of eWBL

The data collected indicates a large consensus regarding the long-term impacts of eWBL.

In all cases, productivity and optimisation of the professionals' time gains were indicated, not only due to the students' environmental isolation and consequent higher concentration levels but also due to the reduction in travel and commuting time - a great stimulus to adopt this training modality on a larger scale. The possibility of working from more distant geographic regions, especially regions where the cost of living is more advantageous, can excite students who are beginning their economic independence. For this same reason, eWBL also expands the possibility of talent acquisition, which translates into greater competitiveness for companies.

Both points also indicate a greater work-life balance achievement in both personal and economic terms. The flexibility of remote work allowed students to better reconcile their professional commitments with their academic and personal tasks and established a parameter that is desirable for most professionals. This new set of values will require companies and HEIs to include a good balance between the easiness of face-to-face work versus the convenience of remote work in their proposals to attract the best talent and ensure the highest satisfaction of trainees.

In recent years we have witnessed how exponential technological innovation has impacted the labour market and set new demands for professional profiles. Although it is still a recent concept that lacks a unified definition, we already see in several academic studies the surge of the so-called industrial revolution 5.0. According to Akundi (2022), Industry 4.0 came about in the 21st century and focused on all types of industries with intelligent systems. The achievements of this revolution include fully automated systems and artificial intelligent systems that work in uncertain situations, with machine learning having a positive influence on the fourth industrial revolution. In the last few years, we have seen a change in paradigms with the arrival of Society 5.0, aiming to place human beings at the midpoint of innovation, exploiting the impact of technology and Industry 4.0 results with the technology integration to improve quality of life, social responsibility, and sustainability (Carayannis, 2022). In Industry 5.0, advanced IT technologies, IoT, robots, AI, and augmented reality are actively used in the industry for the benefit and convenience of human workers. Therefore, Industry 5.0 is not founded on technology but on principles such as human-centricity, environmental stewardship, and social benefit. Thus, in the face of the 4.0 / 5.0 economy surge, eWBL's contribution to soft skills development is extremely valued by the market: autonomy, problem-solving, resilience, critical thinking, and digital skills, increasing interns' future employability. However, the study also showed evidence the solution does not apply to all types of activities, industries, and student behavioural profiles, requiring a thorough evaluation by program supervisors and facilitators to adapt and, consequently, enhance the benefits of the practice on student development.

However, while the full range of negative long-term impacts of eWBL is not yet measurable, there is an almost unanimous perception that eWBL can hinder social skills development. Among the most indicated ones, corporate culture acquisition, networking, and integration - all activities that can contribute to students' sense of belonging, improve mental health, and increase trainees' satisfaction and engagement. In addition, remote work can hinder activities that involve greater teamwork, collaboration (brainstorming) and communication (giving/receiving feedback, passing detailed instructions), and strategic and important meetings, which should be prioritised for a face-to-face environment.

Thus, the massive recommendation of the respondents is the adoption of a hybrid internship model, with the proportion of presential versus remote days still to be better studied, as well as the definition of which functions and employees' profiles would follow this dynamic. In this case, the onboarding of students, strategic sessions,

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and teambuilding activities would occur in person, while operational, research or activities that require greater isolation and concentration would be performed remotely. Coordination meetings with HR and selection processes would continue online, ensuring greater flexibility of the schedule.

Even with the blended model, some issues deserve a closer look. eWBL is not yet a consensus among all companies and HEIs. Some see the model as highly beneficial, while others have several restrictions and are feeling pressured to adopt online internships to attract and retain the best talent. In any case, it is important that WBL providers also start offering eWBL to keep the future workforce up-to-date.

Complementing the work of Hora et al. (2021), our results show that the issue of equity and accessibility might be both minimized and enhanced by eWBL. Our data shows, in concordance with Hora's research, eWBL increases the economic inclusion of students (i.e., it allows students from more distant regions to do their internship without having to incur extensive travel or living expenses), on the other side, it would be important to point out this statement would be only valid if companies can commit to ensuring fair remote work conditions (internet connectivity, equipment) for all eWBL students.

In addition, it is crucial to carefully evaluate the possible risks of excluding students. Remote work can become an entry barrier for people with some physical or intellectual disability, first-generation academics, or weaker social and economic backgrounds population, negatively impacting their visibility among peers and supervisors, thus further increasing their exclusion.

As stated in the German National report, people with disabilities or who cannot afford to live in an expensive city can become less visible in the workplace and will be overlooked by society, creating and reinforcing different social classes. It can also be translated to online lectures at universities, as studies show that people with weaker social and economic backgrounds and first-generation academics have more negative consequences from studying online than people with other conditions (Case 3).

Thus, for eWBL adoption to be inclusive, special attention to trainee training is fundamental. Stimulating the distance learning platforms utilization is an opportunity to allow personalised and self-paced skilling and upskilling of trainees and employees in general, considering that everyone has satisfactory access to technology, connectivity, and a productive workplace. From an operational point of view, it is also core to assess the companies' digital culture and, based on the results, provide training for active employees. Also, it is necessary to redesign communication and work processes to ensure remote work efficiency. As the last point, some companies and HEIs make it clear that not all activities and student profiles are suitable for eWBL. Activities that require direct contact with customers (tourism sector) and surveys depending on the online assessment may be misleading, or specific student profiles may not be the most suitable for eWBL. To overcome this, companies need to adjust tasks to the specificities of remote work.

Regarding the technological adaptation issues, many existing remote work tools and platforms adapted very well to eWBL. Software like Zoom, Slack, MS Teams, Blue Jeans, Microsoft Dynamics, Dropbox, Google suite, Outlook, SAP, and WhatsApp, were extensively used. In some cases, we could also note the use of e-learning platforms, either in-house or outsourced. In one specific case (IR – Case 4), the host startup used a virtual office environment at metaverse where the trainee had to be present regularly.

Finally, at the end of the training program, HEIs conducted evaluations consisting of a self-evaluation report where students evaluated the company and the performed tasks at the beginning and end of the course and gave a personal grade. In general, in HEIs' opinion, this process did not change even to absorb and evaluate the competencies development evolution related to the digital environment, which is a point to be better measured in the future.

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8. BIBLIOGRAPHY

Akundi, A.; Euresti, D.; Luna, S.; Ankobiah, W.; Lopes, A.; Edinbarough, I. State of Industry 5.0—Analysis and Identification of Current Research Trends. *Appl. Syst. Innov.* **2022**, *5*, 27. https://doi.org/10.3390/asi5010027

Carayannis EG, Morawska-Jancelewicz J. The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. *J Knowl Econ*. 2022 Jan 5:1–27. doi: 10.1007/s13132-021-00854-2. Epub ahead of print. PMCID: PMC8732972.

Deželan, Tomaž, Samo Pavlin, Ivan Svetlik and Miha Zemšek. 2018. Integrating Entrepreneurship and Work Experience in Higher Education National Literature Review Slovenia. Avaialble at: https://wexhe.eu/wp-content/uploads/2020/07/Slovenia-Literature-Review.pdf (19 August 2022).

Garnett, J. (2005), "University work-based learning and the knowledge driven project", in Rounce, K. and Workman, B. (Eds), Work Based Learning in Healthcare, Kingsham, Chichester, pp. 79-86.

HAPHE. (2016). Harmonizing approaches to professional higher education in Europe: Definition and characteristics of professional higher education. *European Commission Life-long Learning Programme*. Available at https://www.eurashe.eu/projects/haphe/.

Hora, M.T., Lee, C., Chen, Z. and Hernandez, A., 2021. Exploring Online Internships amidst the COVID-19 Pandemic in 2020-2021: Results from a Multi-Site Case Study. WCER Working Paper No. 2021-5. *Wisconsin Center for Education Research*.

Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, 40(2), 350–367.

Kodele, Tadeja, Klavdija Kustec, Tamara Rape Žiberna. 2021. Praksa na Fakulteti za socialno delo v času izrednih razmer. Izkušnje študentk in mentoric v prvem valu epidemije covida-19. *Socialno delo,* 60 (3), 253-271.

Lester, S., and C. Costley. 2010. "Work-based Learning at Higher Education Level: Value, Practice and Critique." Studies in Higher Education 35 (2): 561–575

Nottingham, P. (2016) The use of work-based learning pedagogical perspectives to inform flexible practice within higher education. *Teaching in Higher Education*. Vol.21(7) p. 790-806.

Perusso, A. (2017). Integrating Entrepreneurship and Work Experience in Higher Education. *National Literature Review Germany.* WEXHE Publication.

Perusso, A., & Wagenaar, R. (2021). The state of work-based learning development in EU higher education: learnings from the WEXHE project. *Studies in Higher Education*,47(7), p. 1-17.

Ruggiero, D. and Boehm, J., 2016. Design and development of a learning design virtual internship program. *International Review of Research in Open and Distributed Learning*, *17*(4), pp.105-120.

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WBLIC. (2016). Work-based learning as an integrated curriculum: A framework for good practice. *European Commission life-long learning programme*. Available atwww.wblic.org.uk/.

WEXHE. (2019). Integrating Entrepreneurship and Work Experience in Higher Education. *European Commission Erasmus+ Programme*. P.6.

Erasmus+ Key Action 220 Cooperation Partnerships
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