eWBL FRAMEWORK: A GUIDELINE FOR TRAINERS IN COMPANIES AND HIGHER EDUCATION

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GLOSSARY:

ENQA: European Association for Quality Assurance in Higher Education

eWBL: Electronic work-based learning

QA: Quality assurance

HE: Higher education

HEI: Higher education institution

ILP: Individual learning plan

MOOCs: Massive open online courses

OERs: Open educational resources

SME: Small and medium enterprises

WBL: Work-based learning

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AIM AND TARGET AUDIENCE OF THIS DOCUMENT

The aim of this document is to provide a comprehensive and practical framework on how to design and implement a high-quality eWBL programme, both in higher education institutions (HEIs) and in companies. The framework is based on an extensive literature review and 27 case studies designed in the first stage of the Erasmus+ eWBL Project. These case studies, along with five national reports and a synthetic report summarising the findings can be downloaded from www.ewbl-project.com

The primary target audience for this document is work-based learning (WBL) trainers in HEIs and in companies who are currently or will (inevitably) face challenges associated with transitioning a number of internship positions from face-to-face do virtual settings. The document covers the different dimensions of eWBL, including design, implementation, assessment and quality assurance. In addition to the document, a toolkit, open educational resources (OERs), and training materials are available on the eWBL Project website, offering further practical support and enhancing the insights provided here.

This document is structured as follows. Chapter 1 provides an introduction to eWBL, highlighting its benefits, main challenges, and the aim of our framework. In Chapter 2, we provide an overview of the recent literature in eWBL and present the research gap, namely, why do we need a framework for eWBL. Chapter 3 presents the methods we use to design our framework, while chapter 4 describes the results; a five stage framework comprised of design, preparation, onboarding, delivery and assessment. Chapter 4 also introduces a system for quality assurance (QA). Finally, chapter 5 offers an overview of the findings, and chapter 6 describes the limitations and future research opportunities.

We sincerely hope you enjoy reading this document, finding it useful for your practice.

1 INTRODUCTION

Over the past three decades, advances in globalisation and digital technology have continuously reshaped the labour market, with present jobs disappearing and new ones emerging in the years to come (Goos et al., 2019; Dabic et al., 2023). These changes are putting great pressure on HEIs as it is no longer sufficient to provide students with theoretical knowledge. To deal with the ever-evolving work environment, graduates require skills and attitudes such as collaborative problem-solving, interpersonal communication, critical thinking, self-efficacy and self-directed learning (Cook, 2020).

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In this context, WBL has emerged as a learning approach that contributes to narrowing these skill gaps (Perusso and Wagenaar, 2021). By allowing learners to engage with real-work situations, WBL helps translate theory into practical knowledge while also exposing students to the sociocultural conditions that are characteristics of a given practice (Raelin 2016). This promotes students' personal, social and critical skills and attitudes that complement working practice (Nottingham, 2016).

Parallel to the developments in WBL, the rapid advance of communication technology allowed the popularisation of remote work as a valid work arrangement, evolving from hot desking to a fully functional work mode (Flanders, 2020). Understanding the benefits of remote work, such as geographical flexibility, lower commuting time, and reduced living costs (Pretti et al., 2020), companies and HEIs started to offer remote forms of WBL — or as we defined for this document, eWBL[1].

Accelerated by the COVID-19 pandemic, eWBL is popularising (Gill, 2020). In addition to the aforementioned flexibility, remote placements foster self-dependent learning, proactivity, time-management and digital communication skills (Bayerlein and Jeske, 2018; Pretti et al., 2020), all essential competencies in an increasingly digital labour market (Dabic et al., 2023). To Kraft et al. (2019), virtual placements are also more inclusive as they help break down geographical, social and disability barriers. However, literature warns that in lacking in-person interaction, eWBL might undermine some of the central advantages promoted by traditional forms of WBL. These include the development of competencies more intimately associated with the physical presence like creativity, teamwork, collaboration, networking, organisational culture, and a better notion of career paths (Bayerlein and Jeske, 2018; Irwin et al., 2022; Pretti et al., 2020).

In this context, eWBL research has already started producing alternatives to deal with some of these limitations. Examples include having a closer intern-mentor relationship, opening multiple communication channels, and exchanging more frequent feedback (Massingill, 2013; Hora et al., 2021, Maini, et al., 2021). However, given that eWBL is still a relatively unexplored phenomenon, there is yet much ground to cover. Specifically, we miss a robust pedagogical framework to orient educators and companies on how to design and implement these and other potential new strategies that could

[1] From electronic work-based learning, which is also the Erasmus+ project name where the data set for this paper comes from. In this paper, the term eWBL is used interchangeably with the term virtual internship, which is the more frequently used term in existing literature.

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further enhance eWBL.

Drawing on WBL, remote work, and online learning literature, but primarily on the results of the first stage of the eWBL Project, which explored how 27 WBL providers across Europe have dealt with the transition from traditional to eWBL during COVID-19, this study offers a comprehensive framework for establishing, delivering and assessing eWBL. In doing that, we are supporting multiple stakeholders to deliver high-quality eWBL; trainers and internship coordinators at HEIs and industry, agencies such as career centres, the students themselves, and more indirectly researchers who can use the insights provided here as a base to further elaborate in future studies.

2 LITERATURE REVIEW

Despite its exponential adoption during the COVID-19 pandemic, eWBL is still a new phenomenon. There is currently little research about it, notwithstanding the various opportunities that it can bring for organizations, HEIs and learners (Hora et al., 2021; Maini et al., 2021). Firstly, eWBL offers interns greater flexibility by providing work opportunities with employers that are geographically distant, including those on other continents (Massingill, 2013; Irwin et al., 2022). Remote work also allows students to effectively combine their internships with other university commitments, such as exams (Pretti et al., 2020). Secondly, eWBL is more cost-effective for interns as they save on commuting costs and some living expenses. This is especially relevant for opportunities in vibrant yet often costly employment hubs such as large European capitals (Pretti et al., 2020). Thirdly, online internships give companies access to a broader talent pool, including also candidates from lower-income backgrounds and with physical disabilities (Kraft et al., 2019). This increased diversity is particularly beneficial for start-ups and small and medium enterprises (SMEs) as it extends their reach when searching for suitable interns to fill the company's skill gap (Jeske and Axtell, 2014). Finally, eWBL is well-suited to foster digital skills like digital communication and IT literacy as well as attitudes such as self-directed learning, proactivity and time management (Roy and Sykes, 2017; Bayerlein and Jeske, 2018; Irwing et al., 2022).

Despite the points mentioned above, there are still concerns regarding the effectiveness of eWBL. These reservations arise primarily from the fact that one of the fundamental principles of traditional WBL is the immersion of students in the real work environment. This immersion, as highlighted by Raelin (2007), is crucial in developing competencies such as communication, collaboration, initiative,

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self-efficacy, networking opportunities, and a clearer understanding of career paths (Raelin, 2016; Perusso and Baaken, 2020). Hence, to evaluate the effectiveness of eWBL, it is crucial to assess the extent to which the physical distance between interns and the workplace hinders the efficacy of eWBL as a valuable learning experience.

Literature on eWBL has already reported several implications associated with physical distancing. The most evident is the reduced social interaction between interns, co-workers, and the organization as a whole (Jeske and Axtell, 2014; Irwing et al., 2022). Interns bond less and are less emotionally attached to their work teams (Johnson et al., 2009). This lack of social interaction has been associated with lower general satisfaction with virtual internships (Hora et al., 2021; Pretti et al., 2020). Moreover, even though digital natives use different forms of feedback in their online interactions, such as 'thumbs-up' and chat (Cheikh-Ammar and Barki, 2014), the absence of a physical workspace makes it less likely for remote interns to receive opportunistic or accidental feedback than traditional interns (Bayerlein and Jeske, 2018).

Networking opportunities are also restricted since interns rarely meet their bosses or colleagues (Gill, 2020). Furthermore, research suggests that the lack of in-person communication may decrease task clarity; interns do not fully understand the task or are kept waiting for a response to a question (Pretti et al., 2020). Similarly, asynchronous communication can also harm cooperative and creative work since these activities require a higher degree of interaction and continuity (Gill, 2020). Finally, Jeske and Axtell (2014) suggest that eWBL undermines the sharing of corporate values and workplace culture due to fewer opportunities for observation and interaction with the organization.

Table 1: Main advantages and disadvantages of eWBL

Advantages	Disadvantages	Main references
1. Broader recruiting opportunities	1. Less social interaction	Bayerlein and Jeske, 2018; Gill, 2020; Hora et al., 2021; Irwin et al., 2022; Jeske and Axtell, 2014; Kraft et al., 2019; Maini et al., 2021; Massingill, 2013; Pretti et al., 2020; Roy and Sykes, 2017.
2. Less commuting time	2. Less feedback	
3. Lower living expenses	3. Communication issues	
4. Flexible study-work balance	4. Undermines cooperation	
5. Foster digital skills	5. Undermines creativity	
6. Self-directed learning	6. Less networking	
7. Proactivity and time-management	7. Lack of immersion	
8. More inclusive	8. Weaker corporate culture	

Academics have proposed various strategies to address the limitations of eWBL. One of the most

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recurring is fostering a close intern-supervisor relationship (also referred to as mentoring) both at the company and the university. Mentored interns have more opportunities to share knowledge and experience with co-workers and peers. This contributes to the development of communication skills and critical thinking (Ruggiero and Boehm, 2016; Jeske and Linehan, 2020). It also increases networking opportunities (Jeske and Linehan, 2020) and alleviates feelings of alienation and social disconnection (Hora et al., 2020).

Clearer communication is also recurrently mentioned as a central mechanism to mitigate the clarity issues mentioned earlier (Poulsen and Ipsen, 2017). Similarly, having more frequent interactions with co-workers and opening several lines of communication between the company and the interns offers learners a sense of connection and belonging with the team (Pretti et al., 2020).

Furthermore, prior studies recommend using multiple forms of assessment in eWBL, mixing formative ones like feedback sessions and reflective logs implemented throughout the entire internship with summative assessment, focused on evaluating learning outcomes more objectively and taking place at the end of the programme (Massingill, 2013).

Lastly, the literature suggests that the intern's personality and skill set are crucial factors in determining their success in eWBL (Jeske and Axtell, 2014). To excel in virtual internships, interns need to be IT literate, self-motivated, independent workers who are proactive about their tasks and seek support from more experienced colleagues when necessary. Additionally, they should possess excellent time-management skills (Massingill, 2013; Jeske and Axtell, 2014). Thus, companies and HEIs should be attentive to these characteristics in their interns or students, both warning about the importance of this skill set and training e-interns for them.

Although the literature offers several recommendations on how to address some of the limitations of virtual internships, eWBL is still a new phenomenon that is not yet widely understood by HEIs and employers. We do not have an exhaustive list of best practices in eWBL, with multiple alternatives to improve it yet to be explored. Likewise, we miss clear guidelines regarding the creation of support structures and learning opportunities within eWBL (Bayerlein and Jeske, 2018). Specifically, there is a need for in-depth qualitative work on the general thoughts and feelings surrounding eWBL to understand the factors affecting its quality (Pretti et al., 2020), together with a robust framework that indicates the practical steps necessary to implement these recommendations (Roy and Skyes, 2017).

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Leveraging on the transition of thousands of work placements from in-person to remote due to the COVID-19 pandemic, the eWBL Project explored how 27 WBL providers across Europe have dealt with the shift to eWBL and what alternatives they have found. Drawing on these results and past research, this document aims to offer educators and trainers at HEIs and organisations a robust framework of tools and strategies on how to set up, implement and assess eWBL.

3 METHODS

The design of the framework proposed in this document was based on 27 case studies collected in five European countries: Ireland, The Netherlands, Germany, Italy and Slovenia (or the project partners). These countries were chosen because they were perceived as a good representation of all European Union member states in terms of economic development but also of higher education (HE) philosophies and traditions: The Anglo-Saxon tradition represented in Ireland and the Netherlands, Humboltian in Germany, Napoleonic in Italy and Soviet in Slovenia (Sam and van der Sijde, 2014).

The identification of the 27 cases involved several methods. In some partner countries (Germany, Netherlands, and Slovenia), we referred to data from a previous Erasmus+ project, WEXHE, which explored work-based learning provision across Europe. We also located cases via desk research, project partners' network, and indication from universities' career centres. Initially, we identified 40 potential cases, with each project partner providing eight cases. From this list, we selected 27 cases to be translated into full cases. The primary criteria for selection were the diversity of disciplinary areas, the quality of the internship provider, and the duration of the internship, with preference given to longer placements of three months or more.

Regarding disciplinary areas, most cases come from applied sciences (75%) followed by humanities and social sciences (22%) and natural sciences (3%). About 75% of cases were delivered entirely online and 25% were in a blended mode. Regarding duration, about 81% of cases were based on placements lasting between three and six months. Ten per cent lasted for less than three months and 9% for more than six months.

Data to design the cases come from semi-structured interviews conducted with companies, HEIs representatives and students or alumni that completed a virtual internship. A total of 86 participants

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were interviewed: 27 HEIs representatives, 27 internship supervisors at the companies, and 32 students or alumni. Table 2 details the number of cases and interviewed participants per project partner.

Table 2: Interview participants and number of cases per country

Country	Cases	HEI representatives	Company representatives	Student or alumni	Total participants
Germany	6	6	5	8	**19**
Italy	6	6	6	8	**20**
Ireland	5	5	5	5	**15**
Slovenia	5	5	5	5	**15**
Netherlands	5	5	6	6	**17**
Total	**27**	**27**	**27**	**32**	**86**

Experienced researchers from the project partners' institutions conducted the data analysis of the interviews at the national level. The analysis adhered to Miles et al. (2014) following an explanatory stance using analytic progression. The researchers extracted the most relevant concepts from the respondents' raw data and grouped them according to the role they play in the dimensions they wanted to investigate: (i) how eWBL was implemented, (ii) the implications of eWBL to the expected learning outcomes of WBL (practical experience, soft skills, networking and workplace culture), (iii) the technological and pedagogical challenges encountered in shifting to eWBL, and (iv) the alternatives found to circumvent the challenges. are the 27 case studies, which were then summarized into five national reports and one synthesis report that condenses the main findings in all five countries.[2]

To translate the insights of the cases and the reports into a framework we used the following analytical steps:

1. We familiarise ourselves with virtual and traditional WBL literature, in particular papers that offered inputs for the development of a framework. Zhao and Johnson's (2012) model, which departs from online learning theory, speaks of four essential elements: planning, strategizing, evaluating, and comprehending. Similarly, Roy and Skyes' (2017) conceptual framework proposes a model based on planning, engaging, assimilating, and reviewing and reflecting. Several models from WBL literature also speak of similar pillars. Both Raelin (1997, 2007) and Ferrández-Berrueco et al. (2016), for instance, propose that WBL should be arranged following a planning, delivering and evaluating sequence.

[2] These and other reports are available on ewbl-project.com

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2. Following Milles et al. (2014) approach to qualitative data clustering, we were able to cluster our primary data to arrive at five fundamental phases in the structuring of high-quality eWBL, which are in line with the aforementioned models outlined by the literature. The five phases are **(1) design, (2) preparation, (3) onboarding, (4) delivery and (5) assessment.**
3. To create a preliminary framework, we filled in the five phases with data that pertained to specific aspects within each phase (sub-phases). For instance, based on several cases that emphasized the importance of training students for online job interviews, we included this recommendation in the 'preparation phase', sub-phase 'recruiting' under the item 'preparation for a job interview'. In addition to our insights, some of the recommendations for the sub-phases were supported and enriched by relevant literature which either confirmed our findings or provided additional details that strengthened our understanding and suggestions.

The final step in developing the framework involved gathering feedback from experts. The project partners shared the preliminary framework with 12 WBL experts: 8 from HE and 4 from industry. The experts included academics at HEIs with experience in online learning, remote work or WBL, managers at HE career centres, and internship supervisors at the university or the companies. We asked experts to give their feedback based on the following questions:

1. Is the literature review sufficient to contextualize the document?
2. Do you agree with the outputs (the five-stage framework)?
3. Are there any items or dimensions of eWBL that we have missed in our model?
4. Are the results useful for your practice?

Their insights were incorporated into the final version of the framework. Figure 1 provides an overview of the methodological process we employed to design the framework:

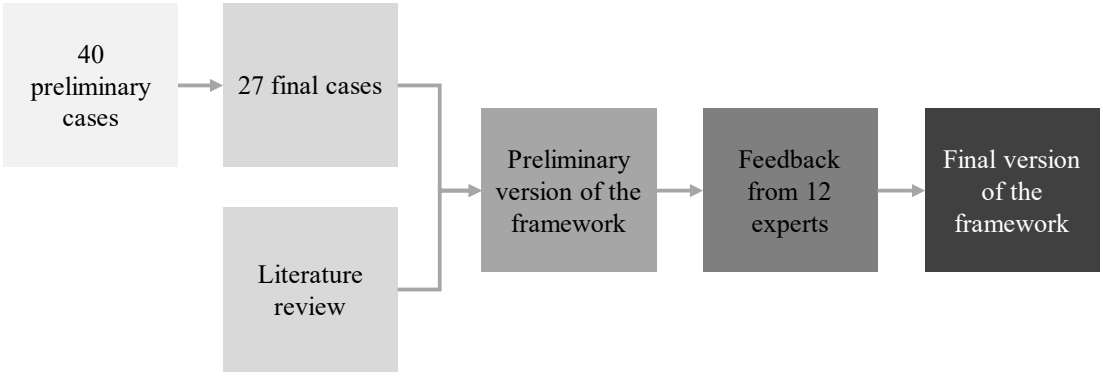

Figure 1: methodological process

4 RESULTS

Our proposed framework includes five phases divided into several sub-phases, as summarized in

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Figure 2. Additionally, a quality assurance (QA) process appears as an arrow indicating a cycle of continuous improvement that impacts the programme implementation (black lines) more directly but occasionally might influence the programme design (grey line). The following sections (4.1, 4.2, etc.) detail each phase and the QA process. We start each section with an introduction of the general relevance of that particular phase to eWBL and then explore the specific activities (sub-phases) that are relevant in that phase. At the end of each session, a table summarizes the main outputs.

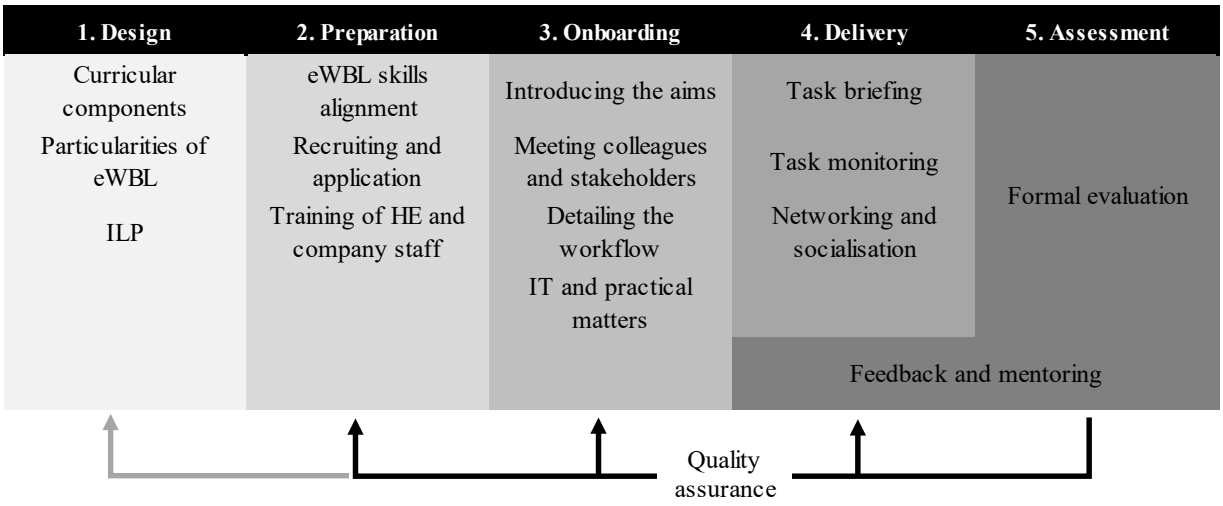

Figure 2: the five phases of eWBL and its sub-phases

4.1 Design

The design phase comprises the planning of eWBL at the curricular level. Consequently, while some design elements are unique to eWBL, most overlap with traditional WBL given that decisions such as in which semester WBL takes place, its duration, and how many learning credits to award are the same for both WBL formats. Therefore, the design phase is divided into design at the curricular level and particularities of eWBL.

4.1.1 Design at the curricular level

As aforesaid, eWBL design at the curricular level requires HEIs and companies to make fundamental decisions that are similar to traditional WBL. The literature covers this topic well, providing several recommendations. For example, the WEXHE (2019) project introduces various tools that can be used to support the design of eWBL programmes at the curricular level. Other Erasmus+ projects, such as HAPHE (2016) and WBLIC (2016) can also be used as references.

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For *HEIs,* design considerations typically include:

1. Which semester the placement will take place;
2. How long it will last;
3. How many learning credits to award;
4. What are the intended learning outcomes and how to assess them;
5. How it aligns with national qualifications standards.

For *companies,* the literature consistently suggests the following:

1. Defining the general responsibilities of the interns;
2. Determining the length of their employment;
3. Deciding on the type of placement contract and compensation;
4. Exploring potential opportunities for long-term employment.

4.1.2 Particularities of eWBL

While eWBL shares similarities with traditional WBL, its design must be adapted to incorporate the unique characteristics of the online environment. Our data highlight the impact of four elements that should be carefully considered:

1. *Academic discipline:* some disciplines like management and engineering can be more easily adapted to the online environment than others like health and social care, which require closer face-to-face interaction. Consequently, eWBL design should consider how remote work impacts the particularities if each academic discipline.
2. *Type of partner organisation:* larger companies with more specialised organisational structures not only offer more jobs adapted for remote working but also have a more robust digital structure in place. However, as suggested by Jeske and Axtell (2014), SMEs might be more inclined to take interns from geographically distant areas to fill a skill gap. Therefore, recruiting and partnership activities should take these characteristics into account.
3. *Learning outcomes:* the eWBL design must consider (and capitalise on the fact) that virtual internships are more suited to foster competencies associated with the digital world, including digital communication, proactivity, and time management oftentimes at the expense of teamwork, creativity and networking skills. Hence, eWBL design must consider these differences and reflect them in the expected learning outcomes.

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4. *Legal and financial aspects:* companies must recognize the added costs that employees incur while working from home, including heating, electricity, IT equipment (laptop, monitor, printer), software, office supplies, high-speed internet, and ergonomic office space. Additionally, companies should consider including insurance coverage for home accidents, damaged work equipment, and cyber-security breaches in employment contracts (Kamdar, 2021). Other potential allowances could include funds for coffee breaks or other perks to improve the remote work experience. Finally, to ensure accountability, companies should consider implementing a work-hour tracking system (Lodovici et al., 2021). While there is no specific legislation regulating remote work in the EU, there are pieces of legislation on working conditions that are relevant for eWBL[3]

4.1.3 The Individual Learning Plan

Garavan et al. (2003) propose an effective tool to facilitate the eWBL design process: The Individual Learning Plan (ILP). The ILP serves as a guide for both the student and eWBL programme coordinators to ensure that the learning objectives are met, and the program is tailored to the individual needs of the learner. An ILP should ideally outline:

1. The learner's expectations and goals;
2. The learner's learning needs in terms of knowledge, skills, and attitudes;
3. The work tasks and training required to achieve these goals;
4. The strategies for monitoring, mentoring, providing feedback, and evaluating progress.

It is important to note that the design phase should encompass the planning of eWBL at a more general level and should be flexible enough to accommodate different job descriptions and employers' needs. If ILPs are used, the design phase should establish a general template that students and mentors can fill up with elements specific to their job experience, i.e. based on the next phases of the present framework.

[3] To be found on the EU Parliment commisioned report: the impact of teleworking and digital work on workers and society (Lodovici et al., 2021)

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Table 3: An overview of the design phase

Dimensions	Key activities	Tools
Curricular level	*HEIs:* Define the basic characteristics of eWBL: duration, credits, assessment, and official qualifications. *Companies:* consider the interns' general responsibilities, contracts, compensation, and long-term employment potential.	Defined by the institution at the programme level and by the company at the HR level.
Particularities of eWBL	*Companies and HEIs:* Adapt the design to the particularities of the online environment, considering the influence of (i) academic disciplines, (ii) employers' capabilities, (iii) learning outcomes and (iv) legal aspects.	Defined by the institution at the programme level and by the company at the HR level.
ILPs	*HEIs:* Outline the ILPs that will be completed by interns and their supervisors in the following phases of eWBL.	Frameworks designed by research projects such as WEXHE, HAPHE and WBLIC.

4.2 Preparation

Different from the design phase, the preparation phase encompasses the more practical activities that companies, but especially HEIs, have to perform before the beginning of the 'work' phase of eWBL. Items that require particular attention include:

1. Aligning intern's skills with remote work;
2. Establishing and implementing online application and recruiting procedures;
3. Providing training to HE and company staff on the needs of remote work.

4.2.1 eWBL skills alignment

Both the literature (Jeske and Axtell, 2018) and our data indicate that succeeding in eWBL is heavily dependent on possessing a specific set of competencies, namely proactivity, self-efficacy, and time management. Although these skills can be improved on the job, our findings indicate that students who lack familiarity with them before commencing their virtual internships may face significant challenges working remotely (Jeske and Axtell, 2014).

To prevent an important misalignment between students' skill sets and the demands of remote work, universities should address this issue early on, in the preparation phase. Ideally, HEIs should

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incorporate training in these competencies into the curriculum, given that the current labour market transition from physical to digital will inevitably require students to master these competencies. However, recognizing the many training pressures that HEIs face from various stakeholders, there are more readily available alternatives to address this skill gap.

HEIs can help students identify their propensity for these attitudes by using self-assessment tools or counselling services. To this, competence level descriptors can be a useful tool. Table 4 shows level descriptors (1 to 4) for the competence 'time management', divided into dimensions A to D. Such a table serves as a valuable resource to assess students' competence level before applying for virtual internships. Additional descriptors for other relevant competences in eWBL can be found in Sánchez and Ruiz (2008) and on the eWBL project website.

Table 4: Level descriptors for the competence time management (adapted from Sánchez and Ruiz, 2008)

Competence dimensions	Level descriptors			
	1	2	3	4
A) Clearly defining goals	Does not plan or live in the short term.	Comply with what is externally required.	Enumerates and describes short, medium and long-term goals.	Regularly revises objectives and the degree of achievement.
B) Ranking objectives according to criteria	Confuses priorities with immediate desires.	Confuses priorities or focuses on the easiest objectives.	Establish clear order of priorities.	Differentiate long, medium and short-term priorities.
C) Planning the activities	Does not plan. Act based on urgency.	Planning is too general, often forgetting to include deadlines.	Has a written plan with beginning and ending dates.	The plan includes alternatives and responses to contingencies.
D) Habitually sticking to plan	Often fall behind or do not achieve objectives.	Meet deadlines but often at the expense of quality.	Achieves goals with sufficient quality and within the deadline.	Not only complete tasks on time but save time for other tasks.

Several online tools can also help students to assess their personality traits and check whether remote work matches their disposition. The 'big five' personality traits can support this process (see truity.com/test/big-five-personality-test). The big five traits, which were developed through a series of studies by Costa and McCrae in 1990 and expanded upon by numerous researchers, include openness, conscientiousness, extraversion, agreeableness, and neuroticism. Given the individual and often isolated nature of remote work, students rating high in neuroticism and extraversion are likely to

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struggle more in eWBL. Conversely, those rating high in conscientiousness and openness might find it easier to work remotely (Gavoille and Hazans, 2022; Parra et al., 2022). Students rating close to or below the average in conscientiousness and openness can receive training to improve their remote work 'suitability'. This training can range from workshops with experts to simpler alternatives like sharing online materials, massive open online courses (MOOCs) or other virtual training tools.

4.2.2 Recruiting and application

Part of the success of WBL relies on offering students enough high-quality internship positions. While eWBL offers the advantage of greater flexibility in terms of location, not all positions are suitable for remote work, especially in disciplines that require frequent face-to-face interaction. To address this challenge, our data suggests filtering positions based on their location (city, region or country level), mode of delivery (online, blended, or face-to-face), and the employer's industry. This shall facilitate the identification of adequate opportunities. Additionally, employers should consider offering applicants access to testimonials from previous interns. This helps anticipate potentially negative expectations about eWBL and to address concerns interns might have about working remotely (Jeske and Axtell, 2014).

Our data also speaks of the importance of job fairs, which are already popular in WBL and could also be offered online with the support of virtual tools like Metaverse. There, students would virtually 'walk' around the job fair visiting company stands and speaking with recruiters. This not only is cost-efficient but more importantly, sets the tone for what to expect in eWBL.

Curriculum vitae (CV) design and preparation for online job interviews are also highly relevant recruiting activities. A 'good' CV for eWBL should highlight the candidate's capabilities to work independently and give evidence that he or she is self-conscious. Likewise, familiarity with netiquette rules (e.g. adequate physical space to attend job interviews, avoiding interruptions, use of formal language, turning the camera on, etc.) is important for candidates, especially at the interview stage. Again, HE staff can train students in these skills. Training can range from sharing OERs and guidelines to more elaborate one-on-one or group coaching with CV review and simulated online job interviews.

4.2.3 Training of staff at HEIs and companies

A last crucial component of the eWBL preparation phase is the training of staff in HE and companies. Our results suggest that trainers in companies and HE are not adequately prepared to support students

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doing eWBL. This lack of preparedness includes technological and pedagogical aspects.

Trainers are not always familiarised with the latest technology, nor with the various productivity tools (e.g. virtual workspaces, collaborative tools) that are often central to the success of remote work. Similarly, they are often unaware of the pedagogical demands of virtual placements such as the need for more constant feedback, a closer relationship between intern and mentor, the fostering of the intern's ability to work independently, and issues associated with poor socialisation.

As a result, it is necessary to offer training to mentors working with eWBL. Such training can be offered virtually, with the help of self-study materials and MOOCs, or in face-to-face workshops. It is the main purpose of the eWBL Project to support this training process, from both technological and pedagogical dimensions. This is done through several tools, activities, and advice offered on our website. For companies, it is also appropriate to assign mentorship over interns to someone with an explicit interest in assuming this role. The chosen mentor should also possess the appropriate skillset, which typically includes strong communication and teamwork abilities as well as a comprehensive understanding of the organisation structure.

Table 5: An overview of the preparation phase

Dimensions	Key activities	Tools
eWBL skills alignment	*HEIs:* Assess and train students for key eWBL skills and attitudes such as time management and proactivity.	Personality traits assessment Online training materials (OERs, courses, etc.)
Recruiting and application	*HEIs:* If positions are offered via a job portal, customise offerings to eWBL. Support in job application including training in curriculum design and netiquette. *Companies:* Adapt offerings for the particularities of eWBL. Consider using testimonials and virtual job fairs to help in the eWBL adaptation.	Virtual reality platforms that can support the development of online job fairs (e.g. Metaverse). Workshop sessions on digital skills, CV design and 'netiquette'.
Training of HE and company staff	*Technological aspects:* staff should be up-to-date with productivity and communication tools for remote work, especially at HEIs. *Pedagogical aspects:* staff should be trained in the unique dimensions of eWBL, including giving constant feedback, following the emotional status of interns, opening multiple communication channels, and offering networking opportunities.	Online materials (courses, OERs, videos, etc). The outcomes of the eWBL project are available at ewbl-project.com.

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4.3 Onboarding

Our results show that limited face-to-face interaction is a significant issue in eWBL. It limits the development of certain soft skills (especially creative and collaborative work), networking, and the absorption of the company culture. However, the literature (Jeske and Olson, 2021) and our findings indicate that one can mitigate this problem by offering interns robust onboarding activities.

Unlike the preparation phase, which supports students to identify and apply for the ideal work placement, the onboarding phase starts when the intern has secured a placement and is ready to commence working. Our framework divides the onboarding into four main activities that, while having different purposes, can be combined into a one-day event or divided into multi-day events. The four activities are:

1. Introducing the internship aims;
2. Meeting colleagues and stakeholders;
3. Detailing the workflow;
4. IT and other practical matters.

4.3.1 Introducing the internship aims

The main role of onboarding is to introduce students to the overall eWBL process. One of these processes includes explaining the general aim of the internship, the intended learning outcomes, the different stages the intern will go through, and the feedback and assessment mechanisms. This should be aligned with the ILP described in the design phase. The introduction to the internship aims should take place in a meeting with the supervisor at the company. This meeting is also a good opportunity for the company to introduce its history, work culture, and its long-term goals.

In line with the recommendations outlined in the preparation phase, it is advisable for employers to also assess the digital skills and remote work readiness of the students at this stage. If any significant gaps are identified, employers should consider providing training sessions at the beginning and throughout the internship to bridge these gaps. These might entail synchronous, asynchronous, individual or group activities.

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4.3.2 Meeting colleagues and stakeholders

After presenting the general internship aims, the intern should be formally introduced to colleagues and stakeholders. While the onboarding can be done online, our results stress that a face-to-face event is highly recommended. This is particularly important in eWBL settings, where interns often work remotely and in isolation and the onboarding might be the only opportunity to physically meet colleagues and stakeholders. Hora et al. (2021) suggest that even a few hours spent face-to-face can already foster a collaborative mindset among co-workers that extends to the virtual world, improving communication and cooperation throughout the whole internship experience. Several activities can be used to introduce the interns to co-workers and supervisors. Examples from our dataset include meet and greet events, group breakfasts or lunches, corporate visits to showcase the company's departments, ice-breaking activities or a small party.

Onboarding events also provide an excellent opportunity to present interns to key IT and administrative staff. Furthermore, onboarding events can be used to create social media groups (such as WhatsApp) for interns or specific interest groups. These virtual groups play a vital role in fostering a sense of community among interns and alleviating feelings of isolation or alienation that arise during the virtual internship.

HEIs can hold similar onboarding events, where interns from different disciplines meet to network with students also working remotely. Our results show that having a network of contacts, even if it includes interns not working for the same employer, helps to minimize feelings of social isolation and creates opportunities to exchange invaluable work experiences.

4.3.3 Detailing the workflow

One of the most recurring challenges of eWBL reported by our research and by literature (Jeske and Axtell, 2014) relates to poor intern-supervisor communication. Supervisors are often unaware of what interns are doing. Similarly, interns frequently complain of unclear instructions and inadequate support. Consequently, eWBL demands a more structured workflow than in-person WBL. This includes more recurring meetings, briefing sessions, and follow-ups, among other touch points.

The onboarding phase can address these concerns by including a timeslot to explain in detail how the

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workflow will be structured. This should cover:

1. The preferred forms of communication for different work situations.
2. The way the work output will be shared (virtual meeting, email, shared work platform).
3. The frequency tasks will be distributed (daily, weekly).
4. The start and end of the work day.
5. The work assessment methods.

Similarly, HEIs should also have an onboarding event to explain their processes, including feedback, mentoring and assessment procedures.

Research participants have also recurrently mentioned the benefits of a so-called 'buddy' system for onboarding new employees. It involves assigning interns to an existing employee (buddy) who guides the new intern through the first few weeks or months on the job. The buddy is typically someone who was an intern and has now been hired for a more permanent position at the company. This shall create empathy and closeness between the buddy and the new intern, which can be highly beneficial when it comes to explaining the company workflow.

4.3.4 IT and other practical matters

While work in eWBL is mostly performed from home, interns should not be expected to rely on their personal IT equipment or bear the cost of purchasing office supplies. As mentioned in the design phase, IT equipment should ideally be offered by the company; and several businesses that we studied used the onboarding day to provide the necessary IT equipment to interns.

Companies also use the onboarding day to install the necessary software and security protocols on interns' laptops or mobile phones and distribute documents or other items necessary for remote work. It is also advisable to offer interns a tutorial on how to navigate the company system, access shared platforms, etc.

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Table 6: An overview of the onboarding phase

Dimensions	Key activities	Tools
Introducing the internship aims	*Companies and HEIs*: introduce the internship aims, learning goals, feedback and assessment mechanism, etc, preferably with the support of the ILP.	Virtual or ideally a face-to-face meeting with representatives from the company and HE.
Meeting colleagues and stakeholders	*Companies:* introduce interns to colleagues, co-workers, IT and administrative staff, and supervisors. Hand out IT equipment and software protocols. *HEIs:* establish a network among interns who will be working remotely within the faculty.	Meet & greet events, group lunches, corporate visits, icebreakers, party. Create WhatsApp or other social media groups for interns only.
Detailing the workflow	*Companies:* present interns to the workflow: task briefing, monitoring, delivery, feedback and assessment. Introduce also productivity and communication tools like file sharing, workspaces, etc. Finally, establish clear working hours and breaks to ensure a good life-work balance. *HEIs:* explain feedback, mentoring and assessment procedures.	Tutorials, a manual of proceedings, help desk. Sharing contact lists: email, telephone, social media, etc. Buddy and mentoring systems.
IT and other practical matters	*Companies:* hand out IT equipment, install the necessary software, sign documents, and deal with other practical matters.	One-on-one meeting with IT. Tutorials, a manual of proceedings, help desk.

4.4 Delivery

The delivery phase encompasses the main work activities of the internship. Our data shows that while remote work can improve interns' productivity due to fewer interruptions, less commuting, and the flexibility to work at the time of the day when one is most productive, it is also filled with unique challenges. Literature stresses that remote interaction can decrease task clarity (Pretti et al., 2020). Moreover, asynchronous communication can harm cooperative work and the follow-on of interns' work by supervisors (Gill, 2020). In line with the literature, our data found that the three most common challenges associated with the delivery stage of eWBL are:

1. Task briefing;
2. Task monitoring;
3. Networking and socialisation activities.

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4.4.1 Task briefing

Task briefing cares about the adequate definition of the work task. Its primary objective is to provide interns with adequate information and instructions regarding what they should do, the expected output, and the deadlines and milestones involved. To achieve successful task briefings, effective communication is essential. However, according to both the literature (Jeske and Axtell, 2018) and our dataset, with its inherent physical distance, eWBL makes follow-up challenging and inhibits interns from asking questions when needed. Interns complain that they do not fully understand the task at hand, often spending days working under the wrong assumptions. Likewise, supervisors complain that interns do not ask questions or try to clarify issues from the beginning, believing they can complete the task despite the missing information.

Participant organisations have typically addressed remote communication challenges through so-called *weekly briefing meetings*. These meetings usually occur at the beginning of the week, when the supervisor details what needs to be done that week. This should include:

1. *Objectives and expectations:* communicate the objectives and expectations for each task. This ensures that interns have a clear understanding of the desired outcomes.
2. *Resources and support:* outline any necessary background information such as reference materials, guidelines, or access to relevant databases. Address questions interns may have or indicate the best person to refer to if not the supervisor himself.
3. *Deadlines and milestones:* specify the deadlines and important milestones associated with the assigned tasks. This helps interns manage their time effectively and prioritize their workload.

The briefing meeting can take place one-on-one or with a larger team. While such meetings are typically held online, companies in our study that worked in a blended environment strongly argue for a face-to-face meeting as it is often easier to instruct in person than remotely.

4.4.2 Task monitoring

Companies should monitor what interns are doing for the same reasons that they should offer clear briefing: remote monitoring is constrained by communication challenges (Hora et al., 2021). Our data

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shows that issues appear on both the interns' and the supervisors' side; interns miss closer support from their supervisors and supervisors complain that they do not know exactly what interns are working on. Our results point out two alternatives to improve remote task monitoring:

1. *Increase the frequency of feedback:* This is typically achieved through virtual meetings. The frequency can vary from weekly events to daily check-ups, depending on the nature of the tasks (complex tasks require more frequent check-ups) and the availability of supervisors.
2. *Being visible:* many participant companies have adopted the practice of keeping interns 'visible' on shared work platforms such as MS Teams or Google Meet. This approach ensures that interns are easily accessible for consultation and encourages ongoing collaboration. This strategy can be complemented by utilizing shared calendars where supervisors and interns can track each other's schedules and tasks, increasing work coordination.

To optimize remote task monitoring, a combination of these two strategies appears to be the way forward. This involves implementing recurring meetings to monitor progress and milestones, while simultaneously ensuring close accessibility and visibility through shared work platforms. However, it is worth noting that several interns interviewed in our study mentioned that an excess of meetings can be fatiguing and stressful. Our data also stress that offering interns autonomy benefits the learning process. Consequently, task monitoring should not be confused with micro-management.

HEIs should also monitor students' activities. Yet, different from companies, our results show that the universities' role is less to monitor what exactly students are working on and more to check on interns' mental and social well-being, their life-work balance, as well as their adaptation to the remote work routine. This can be achieved through a weekly or monthly meeting which can be combined with a feedback session, as detailed in the assessment phase.

4.4.3 Networking and socialisation

An important benefit of WBL to interns is the opportunity to immerse into a real work environment, understanding the implicit norms, language and behaviour in a given field of work. This immersion also allows interns to start a network of contacts and build up their social capital (Raelin, 2016). However, such elements are more restricted in virtual internships (Pretti et al., 2020).

While our results confirm the negative impact of eWBL on socialisation and networking, they also

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show multiple alternatives to circumvent this issue:

1. *Participation in 'senior' online meetings:* by allowing interns to attend senior-level meetings, even if they do not actively participate, they have the opportunity to observe the working styles and behaviours of more experienced members within the organization. In one of our case studies, the internship supervisor offered students a quick briefing before the meeting to explain who were the participants, their position in the organisation and what was going to be discussed. Our results show that attending such meetings helps interns to absorb the company culture and expand their social network.
2. *Social networks:* Another useful approach to improve networking is to encourage interns to create an account and be active on LinkedIn or similar professional social networks. Additionally, company and HE supervisors should encourage interns to make use of their position as an intern to actively establish contact, ask questions or arrange coffee breaks with co-workers and senior employees.
3. *Virtual events:* Companies and HEIs can also set up virtual events to increase proximity, including online happy hours, games, quiz nights, and other interactive activities. Although our results show that these activities can be beneficial, several interviewees viewed them as somewhat artificial or 'top down' in nature, limiting their potential to create deeper engagement among participants. Nevertheless, the consensus is that such events are still worthwhile. Interestingly, data also suggested that events attended only by interns have a higher engagement level than those where management is present as they give interns a sense of ownership that events organised by management do not.

Companies typically organise virtual socialisation not only for interns but for the whole team. HEIs can do it at the faculty or programme level, connecting interns working for different companies. Noticeably, such events work better face-to-face. Companies adopting blended work should attempt to do them in the office. Likewise, HEIs should attempt to organise interns' meetings on campus whenever possible.

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Table 7: An overview of the delivery phase

Dimensions	Key activities	Tools
Task briefing	*Companies:* Virtual meetings held at the beginning of each week or day. Detail the task deliverables, information sources, milestones, and deadlines. The meeting can be one-on-one or with a larger team.	Video conferencing.
Task monitoring	*Companies:* Weekly or daily feedback meetings. Work platforms also help to reach interns via calls or chat for closer checks. This can be combined with shared calendars for better task coordination. *HEIs*: Can monitor the intern‘s progress via weekly or monthly feedback meetings. This is especially relevant to check on interns' social and mental well-being.	Video conferencing Virtual work platforms (e.g. MT Teams) for close monitoring Shared calendar function for agenda synchronisation. Other communication channels such as WhatsApp, email, phone, etc.
Networking and socialisation	*Companies:* Interns can attend senior-level meetings to observe how senior employees behave. Ideally coupled with a briefing on the meeting’s aim and its key participants. Also encourage interns to contact senior people within the organisation and ask questions, advice or to meet. Finally, set up socialisation activities to increase proximity. Can be online or face-to-face and include the whole team or just the interns. *HEIs:* Promote similar socialisation events but aimed at interns from the entire faculty or study programme.	Virtual meetings Professional social networks, either external (e.g. LinkedIn) or internal. Virtual happy hours, events, games and quizzes.

4.5 Assessment

If on the one hand, WBL creates an environment that promotes multiple modes of learning, on the other, it is challenging for HEIs and companies to evaluate if the intern has achieved its various learning outcomes (Lester and Costley, 2010). Consequently, WBL requires multiple forms of assessment and eWBL is no different (Massingill, 2013). Specifically, Moon (2004) suggests separating WBL assessment into (i) feedback and mentoring and (ii) formal evaluation. The first is a constructive and continuous process that is sometimes referred to as *formative assessment*, taking place throughout the entire duration of the internship, as figure 2 indicates. The second takes place at the end of the programme and it has a more *summative orientation*, ultimately aiming at learning validation and accumulation of credit points.

4.5.1 Feedback and mentoring

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The aim of WBL is not simply to provide work opportunities for students but to use work as a vehicle for learning; or learning *through* work (Gray, 2007). To this process, experiential learning literature emphasises the contribution of reflection. Scholars argue that unexamined experience (in this case work) is an unreliable source of learning because we often make wrong judgments about our actions and what they mean (Lambie, 2009). However, when experience is reflectively examined, it helps learners to cross beyond impressions and immediate judgments, transforming the experience into a source for improved action and behaviour (Raelin, 2016). Consequently, companies and HEI should offer learners multiple opportunities to discuss and reflect on how work is contributing to learning.

Literature offers several alternatives on how to conduct feedback and mentoring. Raelin (2016) stress that feedback should take into consideration the different dimensions that WBL fosters, including practical knowledge acquisition, development of soft skills and attitudes, networking, and career prospect. Moon (2004) and Perusso et al. (2019) suggest that feedback should encompass different formats including self-assessment, one-on-one interviews and group feedback.

One possible way to integrate these multiple forms of feedback would include, first asking interns to fill out a pre-designed self-assessment form and then using the results as a basis for a one-on-one discussion with the supervisor. If conditions allow, group feedback can be added to it, including the intern, his supervisor at the company, co-workers and the supervisor at the HEI. The framework presented in Figure 3 is a useful guide and the Dutch case four[4] provides an example of its implementation.

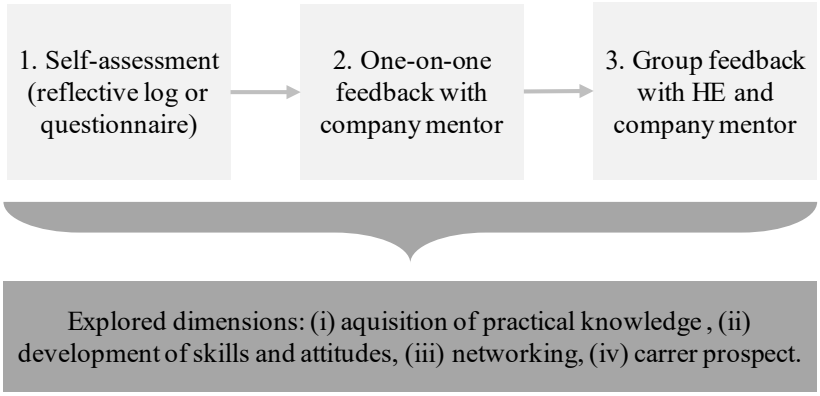

Figure 3: A framework for structuring feedback and mentoring sessions

From a practical standpoint, companies and HEIs need to plan these activities in advance and at a

[4] Available at www.ewbl-project.com

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structured level. That is, apply the same structure to all interns. Consequently, it is advisable to have the feedback and mentoring process thoroughly described in the ILP mentioned in the design and onboarding phases, including the dimensions to be explored and the pedagogical methods to be used.

Regarding the delivery process, virtual meetings are the most straightforward alternative but companies working in a blended model might want to do the feedback and mentoring face-to-face. The frequency of these meetings depends on the resources available, yet both literature (Jeske and Axtell, 2014) and our data highly recommend frequent events, such as weekly meetings, as a best practice. When self-assessment is required, it can be conveniently conducted online with the support of several survey tools (e.g. Google Forms, Survey Monkey) or through the e-learning platforms used by the HEI.

4.5.2 Formal evaluation

Our findings indicate that there is no significant difference in the formal evaluation of eWBL compared to traditional WBL. Both are typically done at the end of the programme in the form of a log diary or an internship report. In some disciplines (e.g. design) this report is complemented by a portfolio that provides more concrete evidence of the work done.

The internship report aims to encourage the learner to critically reflect on the tasks performed, relate to the theory acquired at the university, and identify the development of transferable skills (Lester and Costley, 2010). The document is often reviewed by the supervisor at the HEI in consultation with the supervisor at the company. However, for such evaluation to work, it is critical to adhere to measurable criteria. To Wagenaar (2018), learner-centred evaluation should ideally encompass:

1. Learning outcomes, stating what the learner should be able to do at the end of the internship.
2. Evaluation criteria, showing how the learning outcomes can be demonstrated.
3. Level descriptors about the characteristics of each learning outcome.

Competence descriptors, such as the one presented in Table 2 in the design phase, serve as a valuable resource for interns and supervisors, facilitating a more objective demonstration of learning achievements. They can be used to design self-assessment questionnaires or to guide one-on-one or group feedback sessions.

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Table 8: An overview of the assessment phase

Dimensions	Key activities	Tools
Feedback and mentoring	*Company and HEIs:* Taking place throughout the whole internship. Can be based on self-reports, one-on-one discussions with mentors, group feedback or ideally all of them. Should include multiple dimensions: (i) practical knowledge acquisition, (ii) development of soft skills and attitudes, (iii) networking and (iv) career prospects.	Aims established in the intern's ILP. Self-assessment questionnaires, reflexive logs, interviews and group discussions.
Formal evaluation	*Company and HEIs:* Taking place at the end of the internship with a summative orientation, ultimately aiming at learning validation and accumulation of credit points. Adhere to measurable criteria, ideally encompassing (i) the expected learning outcomes, (ii) evaluation criteria with level descriptors and (iii) the achieved outcomes.	Self-assessment questionnaires, reflexive logs, reports, interviews, portfolios and case studies.

4.6 Quality assurance

A final process that is central to eWBL success is QA. While QA should consider the contribution of the interns, it is not necessarily associated with their individual assessment as discussed so far. Instead, QA relates to a process of continuous improvement of the eWBL experience itself. Although the QA activities proposed here share similarities with those suggested in traditional WBL literature, it is crucial for any WBL framework, whether virtual or not, to incorporate QA activities.

To Schindler et. al. (2015), QA is concerned with describing the central goal or outcome of the intervention and identifying specific indicators that reflect desired inputs and outputs. To that definition, Costley and Armsby (2007) add that all aspects of the course should be designed to be work-based, quality should be measured more in terms of working practice than content acquisition and the university should be a knowledge catalyst rather than a knowledge provider (Costley and Armesby, 2007).

The WEXHE project (Gourdin et. al, 2020) further suggested that universities and industry partners should collaborate in WBL design and have procedures for designing and approving their WBL programmes. Furthermore, it is important to clearly define and communicate the qualifications that students will attain through these programs, ensuring they align with national qualifications standards.

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Finally, HEIs must ensure that WBL programmes encourage students to take an active role in shaping their learning process and that the assessment formats reflect this.

From an online learning perspective, Karam et al. (2021) propose QA policies that take into account the training of faculty in online pedagogical approaches and the capabilities of the institution's learning management system. They also emphasize the importance of providing support to faculty in using the technologies and tools available and offering a course management system that assists in course design, delivery, and assessment.

Combining the different sources, we arrive at a QA model applicable to eWBL, with the key activities detailed below:

1. The eWBL programme should be designed collaboratively by HE and industry. Activities should meet the aims of the employer but also the learning needs of the student as an employee. This means ensuring that students work on meaningful tasks and take an active role in their learning process, avoiding 'work for work's sake'.
2. Qualifications resulting from the programme should be specified and communicated to the different stakeholders. They should also relate to the correct National Qualifications Framework. Special attention should be given to remote work aspects such as credit validation and home-office working conditions.
3. Faculty and supporting staff should receive adequate training in using the technologies and tools available for eWBL.
4. In the internship delivery phase, it is necessary to collect data to monitor student participation and satisfaction at the programme level (for all employers) and assess the effect of eWBL on established learning outcomes at the assessment phase.
5. Analyse the data to explore a potential quality problem. A feedback loop could initiate quality improvement in the different phases of eWBL.

The five activities are also described in the form of a cycle in Figure 4. As proposed by Schindler et. al. (2015) activities are divided into design-level tasks (light grey boxes) and implementation-level tasks (dark grey boxes). The arrows indicate that quality issues that potentially emerge might concern only its implementation activities (dark grey line) or require a re-design of the entire programme (light grey line).

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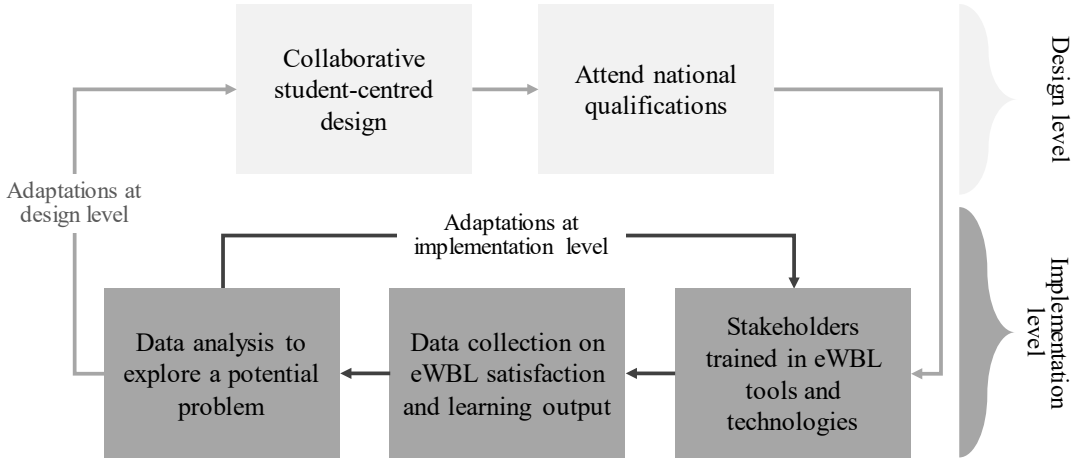

Figure 4: QA model for eWBL

5 CONCLUSION

Virtual internships offer valuable opportunities for students, companies, and higher education institutions by providing flexibility, inclusiveness, and developing competences that are relevant in an increasingly digital labour market. However, the lack of physical interaction often hinders the acquisition of skills typically associated with WBL such as teamwork, creativity, problem-solving, social awareness and networking.

While researchers already started to develop alternatives to circumvent some of these issues, we still miss a pedagogical framework on how to design and implement these and other potentially new strategies that could further enhance eWBL. It was the purpose of this paper to address this gap by proposing a comprehensive framework for eWBL based on existing insights from literature, but primarily on the findings of the Erasmus+ project eWBL.

Our results bring forward a framework that differentiates five main conceptual phases in eWBL: design, preparation, onboarding, delivery, and assessment. These are broken down into several sub-phases that provide practical steps for their implementation. While the framework shares similarities with existing models from 'offline' WBL, such as emphasizing careful prior planning, task alignment with learning outcomes, and incorporating both formative and summative assessments, our findings uncover unique features primarily found in eWBL, including:

1. *Design phase*: eWBL typically fosters a different set of competencies than WBL; mainly time management, proactivity, digital communication and self-dependent learning. Likewise, is important to recognize that different academic disciplines may have varying levels of compatibility with remote work. Finally, IT equipment supply, setting up a safe and ergonomic

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work environment, and a system to track working hours need to be considered, especially by employers. All these factors should be incorporated into the design of eWBL programmes.

2. *Preparation phase:* Not all students will be readily fit for eWBL because effective remote work requires interns to already be familiar with the specific set of competencies mentioned earlier. Therefore, HEIs should inform, assess and train students for these competencies before the start of the internship. Likewise, trainers in HE and industry are often unprepared for the technological and pedagogical challenges associated with eWBL and also require training.
3. *Onboarding phase:* It is strongly advised to arrange at least one in-person session where eWBL interns are introduced to their co-workers and provided with an overview of the internship's aims, work processes, and practical details. This face-to-face familiarization should help interns to bond with the organisation, facilitating collaborative work and reducing feelings of isolation further during the placement.
4. *Delivery phase:* eWBL requires clear task instruction, frequent feedback and the use of multiple channels of communication. This shall produce better work outputs and reduce the negative impact of social isolation. Here is also where virtual socialisation, like online happy hour, takes place, being especially relevant for networking.
5. *Assessment phase*: eWBL has the potential to be isolating, therefore it demands continuous feedback during the entire internship. This includes feedback from company mentors, peers and supervisors at HE. Unlike the feedback from the delivery phase, which is more job-oriented, feedback at the assessment level should consider the multiple dimensions of WBL, including knowledge acquisition, development of soft skills and attitudes, networking and career prospects.

Although we tried to build a comprehensive model, we are aware that every framework requires adaptations to the demands and resources of organisations and HEIs. Certain disciplinary areas, such as management, design, and engineering, naturally lend themselves to remote work and can more easily apply the concepts outlined in this framework. However, other disciplines where face-to-face interaction is central, like health and social care, might undergo more radical changes; perhaps focusing on the remote aspects of the job such as telehealth. Likewise, for the lack of staff or resources, smaller organisations and HEIs perhaps cannot incorporate all recommendations provided here. Nevertheless, these resource constraints should not deter these organisations from implementing some of the more simple recommendations highlighted here.

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Finally, we would like to stress that this framework is only a component of the Erasmus+ eWBL project. In addition to the materials introduced here, several tools will be available on our website (ewbl-project.com). These include OERs, a toolkit, training materials, templates, checklists, external resources, etc.

6 LIMITATIONS AND FUTURE RESEARCH

There are a few relevant limitations to this work. Firstly, our data comes from a European context where WBL is reasonably consolidated and IT infrastructure is relatively widespread. We do not know if the recommendations offered here would fully apply in environments with different cultural, educational and infrastructural backgrounds. Similarly, in our 27 cases, we tried to incorporate different disciplinary areas. However, WBL is still far more popular in applied areas than in other disciplines (WEXHE, 2019). Hence, our work is applied best in such academic fields.

Regarding future research, we believe more empirical data is necessary to further corroborate and adjust the mechanisms suggested here; inside and outside of Europe and in different disciplinary areas. Moreover, it would be beneficial to evaluate the impact of the present framework against real-life examples. Insights from practice would certainly improve the present results and support the design of more advanced models. They could also guide how to tailor eWBL programs to different contexts and populations.

Finally, our data also speaks of the benefit of blended approaches that mix remote and in-office workdays. While it undermines some of the advantages of fully remote eWBL, such as geographical flexibility, blended internships can mitigate certain disadvantages of physical distance while still enjoying the advantages of remote work. Further studies can explore the effectiveness of this approach in enhancing eWBL.

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