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Lessons From Redefining Traditional Work Placements For University Students In TU Dublin

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LESSONS FROM REDEFINING TRADITIONAL WORK PLACEMENTS FOR UNIVERSITY STUDENTS IN TU DUBLIN

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ABSTRACT

There is strong support for ensuring all university students have an option to undertake relevant work placement. Work-placements enable students to engage with enterprise and develop experiential learning while linking their academic study and theory to real industrial practice. Such placements, or internships, offer students an opportunity to build their self-confidence while refining their transversal skills such as creativity, innovation, communication, team-working and problem solving. Furthermore, placements broaden students' knowledge base and improve their employability upon graduation.

While student cohorts benefit from engaging with enterprise the enterprise also benefits, such as from the energy, new perspectives and ideas interns can bring to the workplace. Multiple models (such as professional apprentices and Earn and Learn models) highlight the importance of this symbiotic relationship. The need to support

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and expand work placement opportunities to benefit all graduates is also a key element of government policy. Supporting this ambition and reflecting changing student profiles, employer expectations and the nature of work, there is a need to re-imagine the traditional understanding of work-placements to safeguard talent pipelines and increase graduate employability.

A concise literature review of existing work placement models is presented. This is followed by a description of the approach developed by the Enterprise Academy within Technological University Dublin to help students achieve learning outcomes typically associated with work-placements in a new, innovative and sustainable way. The approach described was successfully piloted for 2 student cohorts during the Covid pandemic. It highlights the value of redefining traditional placements for students, enterprise and higher education providers.

1 THE IMPORTANCE OF EXPOSURE TO ENTERPRISE AND WORK PLACEMENTS FOR GRADUATE FORMATION

Exposure to enterprise is crucial for university graduates as it provides them with the opportunity to apply and refine their academic knowledge while simultaneously gaining real-world experience. This exposure equips graduates with practical skills and knowledge that are highly relevant in today's competitive job market. More specifically, graduates develop transversal skills in areas such as project management, teamwork, creativity, communication, problem-solving, and critical thinking, which are highly sought after by employers. This practical exposure also helps graduates to understand how businesses operate, including their structure, processes, and challenges. Furthermore it provides them with a realistic understanding of the working world and instils confidence in them regarding how they can successfully interact with it.

The importance of work experience and how it provides graduates with key practical, transversal skills to help them bridge the gap between academia and the real world, enabling them to become well-rounded professionals, is recognised. In doing so graduates expand their professional network, and cultivate an entrepreneurial mindset. Giving students the opportunity to engage in work placement also aligns both with Irish Government policy [1] and the advice from professional bodies such as Engineers Ireland, highlighting the need for universities to prioritize providing opportunities for exposure to enterprise as part of students' formal education. Section 2 summarises existing approaches to work placement from the literature and the need for alternative approaches. Section 3 describes the way that we re-imagined work placement and piloted it during Covid. Section 4 summarises the results of our impact analysis and summarises the lessons learned from our pilots. Concluding remarks are presented in Section 5.

2 LITERATURE REVIEW: THE NEED FOR ALTERNATIVES TO TRADITIONAL WORK PLACEMENT

The key concepts of Work Based Learning (WBL) where learning occurs in the work environment, and Work Integrated Learning (WIL) where learning is intentionally integrated with the practice of work, are differentiated in the literature [2]. Placements, where students are physically based in the workplace for a specific time period, have traditionally been the most common approach for fostering engagement between enterprise and education. This traditional work placement model may not be accessible to all students, particularly those facing financial constraints, geographical limitations, or other personal circumstances. Work placements can also be concentrated in urban areas, making them inaccessible for students who live in rural or remote regions or who might find it difficult to secure appropriate and affordable accommodation away from their usual place of residence. Business cycles can also limit the number of work placement opportunities available at certain times and this risk must be mitigated and alternatives considered.

Considering the shortfall of opportunities for placements and internships and factors that impede some students from committing to being physically based in the workplace, there is a need to explore alternative approaches [3,4,5]. Increasing attention has therefore been given to alternative formats which fall under the umbrella term of WIL, namely, hackathons, simulations, role modelling, site visits, enterprise projects and other experiential learning projects that prioritise the development of discipline-specific competencies related to professional practice and transversal or soft skills [2,3,4,6,7]. WIL intersects theoretical and practice learning and essentially brings real world work experiences into the classroom. It encapsulates the broad spectrum of enterprise-student engagement practices [7]. These new models can provide opportunities for students to work in cutting-edge industries, emerging fields, or unconventional career paths where opportunities available might align more appropriately with students' interests or expectations.

Whether it is WBL or WIL, the value is evident and is outlined extensively in the literature [3,4,7,8,9]. Benefits include the development of employability skills and work readiness [2], the fostering of career managing competencies such as professional networking, labour market understanding, informed career goals [8] and advancing transversal skills such as teamwork, problem-solving & decision-making.

The basic premise for both WBL and WIL is that not all skills can be learnt in the classroom or workplace but through a combination of both [2]. Affording students the opportunity to interact with different practitioners in a company though WBL or WIL initiatives requires a sophisticated level of both technical & non-technical skills [6]. Through the provision of authentic learning experiences to students across their learning journeys, the goal is to help students successfully and confidently transition to work. Having an increased clarity of their career expectations will improve their chance of success upon graduation.[3,4]. Such integration of theory and practice to directly support students' career readiness is a powerful learning approach [4]. Work-

based experiences are essential to prepare students for the real-life context of their professional practice [6].

Students value the opportunity to engage with enterprise and develop an understanding of their proposed career through both traditional and non-traditional placement experiences [4,8]. Students cite the value of working with others and having unique experiences focussed on work related tasks as key to success when entering the workplace [10]. The more holistic approach is deemed necessary to ease students out of their comfort zone and face the emotional challenges within the work environment [10], helping students refine their transversal skills. Upon completion of a WBL or WIL programme, students reported the benefits of having an increased ability to identify their capability gaps and better synthesise their strengths and motivations [8].

The literature highlights that students require more WIL opportunities as they realise the benefits in terms of both skill development and the fact that practical experience is such a high priority among graduate employers [3,5]. The pilot programme discussed in section 3 addresses this and confirms the positive impact of WIL for all students.

Graduate employability is one of the fundamental issues influencing the missions of Higher Education Institutions (HEIs) [6] and they strive to find ways to enhance student employability. The importance of adopting a more holistic and skills-based approach to developing employability is well documented in the literature [10]. The need to go beyond the skillset that can be taught and learnt solely in a classroom and adopt a more integrative approach to boosting employability is a top priority in HEIs [2,3,7,10]. Educational institutions, academics, employers, and even policymakers must consider alternative work placement options that provide students with more flexible, adaptable, diverse and potentially more inclusive pathways to gain real-world experience and enhance their employability.

Reedy et al. document a case study where engineering students embarked on a project oriented, problem-based learning (PO/PBL) WIL learning activity to increase their workplace awareness and boost their work-readiness capabilities [5]. Students were tasked with solving a unique enterprise challenge requiring both technical and non-technical skills for its resolution, meeting with both enterprise and academic mentors weekly to discuss their progress [5]. The study revealed the value of this model for boosting students' professional identity, motivation and providing useful opportunities for students to develop employability skills in a supportive environment.

The Sustainable Innovators for Enterprise (SIE) programme documented here adopts a similar approach by facilitating a space for students to engage with the world of work via an enterprise challenge. The SIE programme prioritises the development of employability and transversal skills through the lens of a global, cross-disciplinary enterprise challenge with an international dimension. It supports the need for more innovative and sustainable models to ensure students receive meaningful opportunities to prepare for their future careers. The remainder of this paper details the SIE work placement programme, built upon research conducted prior to the Covid pandemic, that highlighted the need for such alternatives. This programme was piloted during the pandemic as an alternative to traditional on-site work placements.

3 STRUCTURE OF THE ALTERNATIVE TO WORK PLACEMENT PILOTS

The work placement programme was structured to mimic a traditional work placement which would meet the requirements of our existing programmes. This programme was available to students across the university and also to international students from Hainan University who are registered on TU Dublin programmes. Student interaction with the programme can be viewed as part of four key phases.

Table 1. Key program activities of program as piloted

Phase	Key Activities	Duration
Phase 1: Introduction SIE Onboarding	Innovation Onboarding Create Confidence Workshop STLR Training Introduction to Cultural Intelligence Enterprise Challenge Day	~ 1 week
Phase 2: Pre-immersion Enterprise Recruitment Kick- Off Session	Recruitment Training Indeed Workshop Indeed Live Hiring Event: Student Interviews for Enterprise Challenges You Got the Job! Student Teams Assigned TU Dublin & Enterprise Mentoring Kick-off Meeting	~ 1 week
Phase 3: Project Immersion Supporting modules Key Project stages (Innovation Lifecycle)	Innovation for Enterprise Global Citizenship in the Workplace Creativity & Human Centered Design Future-Proofing Talent 1. Empathy & Problem Definition 2. Investigate, Human Centred Research and Empathy 3. Ideate, Evaluate and Prototype 4. Build it and Test it 5. Iteration and More iterations 6. Implementation Part 1 7. Implementation Part 2	~ 10 weeks
Phase 4 Post-Immersion	Final documentation and pitch	~ 1 week
Innovation Conference		End of programme

a) Recruitment to a particular challenge

As part of Phase 1, each enterprise presented details of their company and proposed their challenge(s). Following this, students had an opportunity to ask some initial clarification questions relating to the enterprise and/or the challenges. Subsequently students applied to undertake a particular challenge. For Phase 2, the Enterprise Academy partnered with Indeed to pilot their Indeed Hiring Platform (IHP) to simulate a real-world recruitment process. The Enterprise Academy worked with the IHP team to design a recruitment process that was suitable for the student cohort. The enterprise challenges were then posted on IHP and students had the option to select their three

preferences. Students then completed a pre-screening questionnaire to assist with determining their suitability for challenges.

The SIE design focused on immersive experiences whereby Indeed hosted an online hiring event over two days. Students were invited by Indeed for an online Interview through the virtual hiring platform. The programme team worked with Indeed to design specific questions and an interview style suitable for the student cohort. Indeed provided several trained recruiters who conducted one-to-one interviews with students. A matching algorithm was used to match the most appropriate students with the challenge most appropriate to their skillset, Students were then “offered the job”. The programme team, Enterprise Academy and Indeed collaborated to ensure each team was composed of the multidisciplinary skillset required for each enterprise challenge. This was part of a detailed process to help the students develop their own career readiness skills. Examples of activities covered include interviewing skills, self-promotion, and building their own profile on Indeed and LinkedIn.

b) Modules

This programme was assigned a total of 30 ECTS credits, matching traditional placement ECTS allocation. The breakdown of this was three five-credit modules and a fifteen-credit Enterprise Challenge module. The modules were co-created with enterprise and academic expertise. Each five ECTS credit module was designed to help students develop transversal skills and support their attempts to follow a systematic design methodology in responding to their design challenge.

Fig. 1: Overview of modules involved in work placement as piloted

Flexibility was designed into the approach to enable students from other programmes, or in part-time placements, to also take individual elements. For example, students who could only secure part-time placements completed the 15 ECTS to scaffold their experience. This modular and agile approach addressed a strategic goal of the university to create economies in module design and delivery.

c) Teaching approach

Each team combined students from TU Dublin and Hainan University resulting in an international, cross-disciplinary experience for all. The virtual exchange model provided an immersive global learning experience for participants bringing diverse students and faculty together across borders of time zones, language, culture and disciplines. The Global Citizenship in the Workplace module was co-created and delivered by faculty from Hainan and TU Dublin exposing students to culturally diverse teaching strategies and providing a rich insight into Chinese culture.

The Enterprise Academy advised on best practice for simulating an immersive work environment. The learning environment emphasised creating 'brave spaces' [11] that fostered creativity. Students engaged with a variety of professional tools such as Mural, Cultural Intelligence Self-Assessment, and strategies such as Wicked Problem Solving and Human Centred Design to facilitate an immersive work experience. Consequently, transversal skills such as wicked problem solving, Cultural Intelligence (CQ) and leadership were developed in a simulated a workplace training and development environment.

d) Role of academic and enterprise mentors

Each team was assigned an academic and an enterprise advisor or mentor to help and guide the teams through weekly meetings. The enterprise advisor was from the organisation who assigned the challenge and were able to answer questions from a customer organisation perspective. The Enterprise Academy partnered with Active Peers AI and internal educational developers to design the SIE mentoring process. Students were expected to arrange the meetings, set an appropriate agenda, take meeting minutes and actively manage the meetings to ensure that all questions that they had were dealt with and answered appropriately within the allocated time slot.

e) Assessment and deliverables

The supporting modules and the Enterprise Challenge were assessed separately and involved different deliverables. The Enterprise Challenge had formative and summative assessments. Students created a portfolio explaining their proposed solution and gave a live pitch to an assessment panel and answered questions in a formal question and answers session.

4 PILOT STUDIES: IMPACT ANALYSIS RESULTS AND LESSONS LEARNED

The two pilots provided insights from a student development and university enterprise engagement perspective. The programme team collected data and observations throughout the pilot design and delivery. Insights collected focused on informing the pilot design and the observations enabled the team to identify areas for student transformation. Prior to commencing SIE all students participated in an interactive workshop to self-identify their personal strengths and areas for development. These workshops utilised human-centered design (HCD) techniques and enabled the programme team to identify student concerns and areas for development. For

example, in both pilots the interview process and confidence in collaboration were identified as areas of concern and as development opportunities. The lessons learned from the first pilot informed the next iteration and the recruitment process was evolved to ensure the students were supported and that the development opportunity was leveraged. Fig. 2 provides an example of the HCD technique Hopes and Concerns applied with the 2021 pilot cohort.

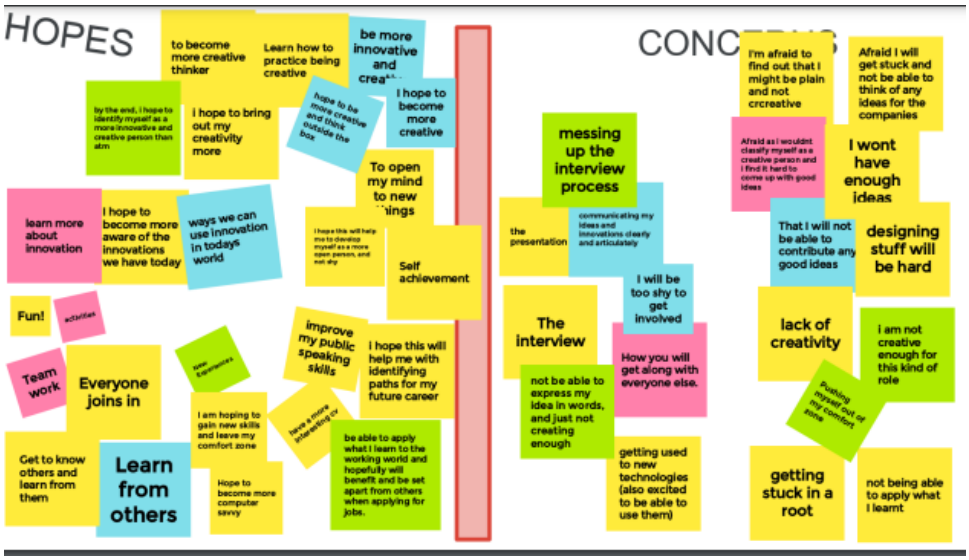

Fig. 2: Pilot 1 Observations 2021, Hopes and Concerns

The student feedback post-pilot presented insights that suggested a positive impact on student development and that SIE was successful in preparing students for the workplace. Table 2 lists a selection of responses demonstrating pilot impact.

Table 2: Positive Insights from Student Feedback

Question	Response Rate
I feel more prepared for the workplace	37.5% strongly agreed, 37.5% agreed
I feel more confident in my communication capabilities	50% strongly agreed, 50% agreed
I feel more confident in my team working capabilities	62.5% strongly agreed 32.3% agreed
Rate your experience of enterprise engagement on SIE	68.8% excellent, 25% very good
Rate your experience of the SIE mentoring programme	50% excellent, 37.5% very good
Rate you experience overall on SIE	Average of 4.19 out of possible 5

The main barriers identified for SIE were perceptions of *work placement alternatives* and *resource constraints*. The programme team observed that faculty and students viewed the 'alternative placement' as an option for students that could not secure a traditional placement. This view of SIE as a lower value experience would need to be

further explored and the impact of SIE on skill development validated through a larger sample. The pilots discussed in this paper received funding to explore technology and professional resources to emulate the work environment.

5 CONCLUDING REMARKS AND FUTURE PLANS

There is strong support for ensuring that all university students have an option to undertake relevant work placement as part of their studies. The lack of accessibility, and potentially availability, of suitable work placements, can limit student opportunities and hinder their ability to gain practical experience. This will require universities to have alternative work placement model options available for their students.

These alternative approaches to work placement can encourage students to explore new areas of interest and can provide them with more flexibility and adaptability in gaining real-world experience while they develop unique skill sets. These new ways of learning and skill development will make them more competitive and adaptable in the ever-changing job market.

The world of work is evolving rapidly and new industries, technologies, and career paths are emerging while non-traditional work arrangements such as remote work, freelancing, and the gig economy are becoming more prevalent. Traditional work placements may not provide students with exposure to the latest trends and innovations, which could potentially impact their readiness for the job market

The lessons learned from this pilot and existing research suggest that students benefit from the opportunity to work in a multidisciplinary environment. Higher education providers have the opportunity to create these immersive environments. However, if the intent is for these environments to prepare students for the workplace then further collaboration with enterprise is needed. This collaboration has purpose for enterprise and can provide many benefits including, access to talent pipelines, insights and research.

There is a need for HEIs to reflect and ask the question 'how are we preparing our students for work?' The answer will require further collaboration with enterprise to co-create education offerings that reimagine the concept of 'close to practice' or 'approximations of practice' [12]. It is hoped that the pilot described here might contribute to the development of flexible and engaging alternatives for students.

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