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Enhancing Work-integrated Learning Through South-North Collaboration: A Comparative Contextual Analysis

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This study contributes a perspective on work-integrated learning (WIL) through the lens of South-North collaboration. The research question was: How might sharing experiences of WIL in different contexts enhance WIL practice in a local context? The purposive sample of twelve case studies; South Africa (n=6) and Ireland (n=6), represented business, engineering, biopharma and health sciences disciplines. Activity theory was drawn on to analyze data on program content, mechanisms and processes, and outcomes and challenges across the case studies. Key findings include: student support requirements, curricular modalities and assessment practices, levels at which WIL is offered, resourcing for WIL and understandings of WIL as enhancing students' employability and as a societal contribution. The data revealed similarities and differences in WIL practices within and across the two countries. Partners developed insights into their own and one another's practices, showing the potential of international collaboration to enhance learning and practice in local contexts.

Keywords: Work placements, internships, South-North collaboration, comparative case studies, activity theory

ENHANCING WORK-INTEGRATED LEARNING THROUGH SOUTH-NORTH COLLABORATION

As workplaces respond to increasing digitalization, automation, globalization, climate change and factors that we cannot yet predict, graduates' occupations, careers and work trajectories are likely to take new forms. The COVID-19 pandemic has underscored the unpredictability of workplaces and economies, and has shown that disruptive events impact countries and industries differently. These global events are the backdrop to a collaboration between South African and Irish WIL researchers. The collaborators were keenly aware that career-oriented education was changing, and that the changes pointed to the importance of agility and resilience, and the need to provide opportunities for students to develop the personal and professional attributes that support adaptability as well as deep discipline-specific knowledge. The researchers were also aware that the very different contexts of South Africa and Ireland would impact WIL provision and its beneficiaries. The research question guiding the study was: How might sharing experiences of WIL in different contexts enhance WIL practice in a local context?

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Background to the South African/Irish Collaboration

In 2019, the Technological Higher Education Network of South Africa (THENSA) and the Technological Higher Education Association in Ireland (THEA) established a cooperation agreement that included a comparative study of WIL in South Africa and Ireland. The intention was to draw on experiences of WIL in the two countries to enhance practice in local contexts. The paper presents the findings of twelve case studies that include exemplars from business, engineering, biopharma and health sciences. Through a contextual comparison, WIL programs and practices in South African and Irish higher education institutions were analyzed with the intention to enhance WIL practices in both countries.

Work-Integrated Learning in South Africa

Public universities are the main providers of higher education in South Africa, with some contribution from private universities and colleges. Universities in South Africa are classified as traditional universities (offering theoretically-orientated university degrees), universities of technology (offering career-focused diplomas and degrees), and comprehensive universities (offering a combination of both types of qualifications). The roles played by universities of technology in South African higher education involve dynamics that are not evident in the global North, given South Africa's apartheid past and current socio-economic challenges, exacerbated by the global pandemic. South Africa is one of the world's most unequal countries, and issues of inequality permeate all aspects of life in South Africa, including WIL. As a result, its social justice agenda makes WIL provision distinctive in South Africa. WIL is thus understood as contributing to graduate employability and, because university students have access to educational resources, WIL is also understood as a societal contribution. Scholtz, for example, argues that WIL in South Africa is less about "personal gain, employability and personal career advancement" and more about "education for public good, thinking of 'the other' and providing community support as required" (2018, p. 69).

Universities of technology were the pioneers of WIL South Africa. At government and policy levels, there is an appreciation of the importance of WIL, mainly due to the positive impact of WIL on student learning and employability. This is evident in the White Paper on Post-school Education and Training (South African Department of Higher Education and Training, 2014) which supports the alignment of theory and practice through WIL. The South African Department of Higher Education and Training acknowledges that WIL is beneficial to students and the broader society and proposes that more institutions offer qualifications that include WIL in their curricula. The WIL modalities proposed by the South African Council on Higher Education include: work-directed theoretical learning, problem-based learning, project-based learning, and work-based learning in the form of authentic practice through work placements (South African Council on Higher Education, 2011). The implementation of WIL in South Africa is guided by the Higher Education Qualifications Sub-Framework which requires WIL to be a structured part of a qualification that is appropriate to the qualification and the cognitive demands of the level. WIL must be appropriately structured, supervised and assessed (South African Council on Higher Education, 2011). Although WIL is increasing offered by a range of higher education providers in South Africa, there are limitations to note: "where the entire WIL component or any part of it takes the form of workplace-based learning, it is the responsibility of institutions that offer programmes requiring credits for such learning to place students into appropriate workplaces" (South African Council on Higher Education, 2013, p. 16).

Twenty years after apartheid, there were "almost a million students in the public sector which represents an exponential growth from the half-million in 1994" (South African Council on Higher

Education, 2016, p. 6). The challenges of finding work placements for increasing numbers students has led many departments to reduce or eliminate work-based learning in their programs. Even though WIL is promoted in government policy and is a credit-bearing component of the curriculum, it is not subsidized by government. This situation has been exacerbated by the increase in the number of higher education students, without a concomitant increase in academic staff. Universities of technology are particularly hard hit by the underfunding of higher education because many of their students experience financial challenges (Reinhard et al., 2016). While higher education is free for students who are economically disadvantaged, the specific lack of government subsidy for WIL limits the capacity of higher education institutions to provide the necessary infrastructure and funding to adequately support the placement of increasingly large numbers of students in industry (Mutereko & Wedekind, 2016).

Work-Integrated Learning in Ireland

Higher education in Ireland is provided mainly through publicly funded universities and institutes of technology, with some smaller and generally more narrowly discipline-focused private providers making up the remainder. At present, higher education in Ireland is undergoing significant change with the introduction of technological universities. The Technological Universities Research Network stresses the role of these new universities in terms of actively working with employers and industry to meet their needs for higher vocational and professional skills and "responding to the major challenges of future work for the economy, technology and the environment" (Technological Universities Research Network, 2019, p. 4). The prior experience and achievements of the institutes of technology was drawn on in the "provision of apprenticeships, part-time, full-time, campus- and work based modes of learning" (Technological Universities Research Network, 2019, p. 4). The National Strategy for Higher Education to 2030 (Irish Department of Education and Skills, 2011) proposed a series of objectives, including a more flexible higher education system with a greater choice of modes of learning. The report proposes work-based learning and recognition of prior learning as key enablers to ensure that higher education provision better meets the needs of adults in the labor force.

Close collaboration between the worlds of academia and the workplace in the development and delivery of learning and in the provision of structured work placements is a core theme of the national skills strategy. The Action Plan for Education 2016 - 2019 echoes the view that the collaboration needs to include a focus on agile opportunities to develop the skills of those who are in work (Government of Ireland, 2019).

The positive policy framework for WIL and the strong links between education providers and enterprises have ensured that WIL is an important and growing part of the Irish high education landscape where students' course selection can be influenced by the provision of a work placement opportunity. There can, however, be considerable variation in the frameworks that support provision and assessment of WIL (Sheridan & Linehan, 2011). The cases selected for this study represent some of the ways in which WIL is realized, including work placement as an embedded and credit-earning part of undergraduate courses, professional practice as a significant and credit-earning element of a taught postgraduate program, and the planned acquisition of learning outcomes through work as part of agile and flexible up-skilling opportunities for workers.

OVERVIEW OF THE LITERATURE ON SOUTH-NORTH WIL COLLABORATION

There is a wealth of literature on South-North cooperation, but very little is specific to WIL. The literature suggests that the context in which WIL occurs is important (Zegwaard, 2019); but this does

not imply that very different countries cannot learn from each other. Indeed, several successful South-North collaborations have resulted in improved WIL curricula, institutional development and enhanced graduate employability. For example, a research collaboration involving the Wismar University of Applied Sciences, South African Universities of Technology and the Namibia University of Science and Technology succeeded in enhancing the employability skills of participating students in all three countries through a comparative analysis of WIL practices (Reinhard et al., 2016). A collaborative study, including partners from Thailand, South Africa, Namibia and Canda, developed a global framework for quality in WIL through comparative methods (Khampirat & McRae, 2016). International collaboration has also enhanced curriculum development (Peach & Matthews, 2011) and professional development (Bilsland et al., 2020). Researchers have found that cross-cultural, cross-disciplinary discussions broaden understandings of WIL (Welch et al., 2012), while international WIL initiatives have enabled student exchanges and study-abroad internship tandems (Gerloff & Reinhard, 2019).

In successful collaborations, knowledge and practices are shared. Sharing curricular documents, learning outcomes and assessment methodologies, for example, can expand what Rangraz and Pareto call the "competence-horizon" (2021, p. 16) of collaborators. Learning from how partners plan work or field placements, assess practice-based and work-based learning, and how they understand cooperative education, apprenticeships and post-qualification internships result in collaborators becoming more attentive to the outcomes and effects that curricular modalities and assessment practice can produce in different contexts (Reinhard et al., 2016). Sharing cutting-edge knowledge, such as finding out about technology-augmented approaches that help students to "quickly contextualize the study content within the functional environment of the workplace, and develop field-specific and self-regulated learning competences" can be inspiring to collaborators (Kusmin et al., 2018, p. 29). However, returning to tried and tested WIL principles, such as the curricular and pedagogical strategies that enable students to experience and engage in work that is relevant to their area of study within a university program so that they may apply disciplinary knowledge and skills in context, is more likely to build sustainable collaborations (Martin & Rees, 2019). Agreeing on WIL principles is acutely pertinent at a "time of technological transformation" (Rangraz & Pareto, 2021, p. 16).

Research collaboration around WIL across contexts requires researchers to make explicit their understandings of how combinations of academic study and work experience can enhance graduate employability, contribute to a skilled and competent workforce, meet industry requirements, and economic development goals (Reddan, 2016). In this regard, when faced with complex challenges, sharing experiences of WIL through collaborations across different contexts is particularly meaningful. Successful international collaborations can be formal or informal, research-focused, curriculum-focused, or focused on enhancing students' WIL experiences. Additionally, international collaboration can open up business and industry networks to partner institutions. Successful South-North collaborations tend to be mutually supportive and often develop hybrid approaches that are sensitive to local needs (Halvorsen et al., 2017). Despite the well-known differences between countries in the global South and North, the literature suggests that there is substantive common ground between them for productive collaboration around mutual WIL interests and concerns.

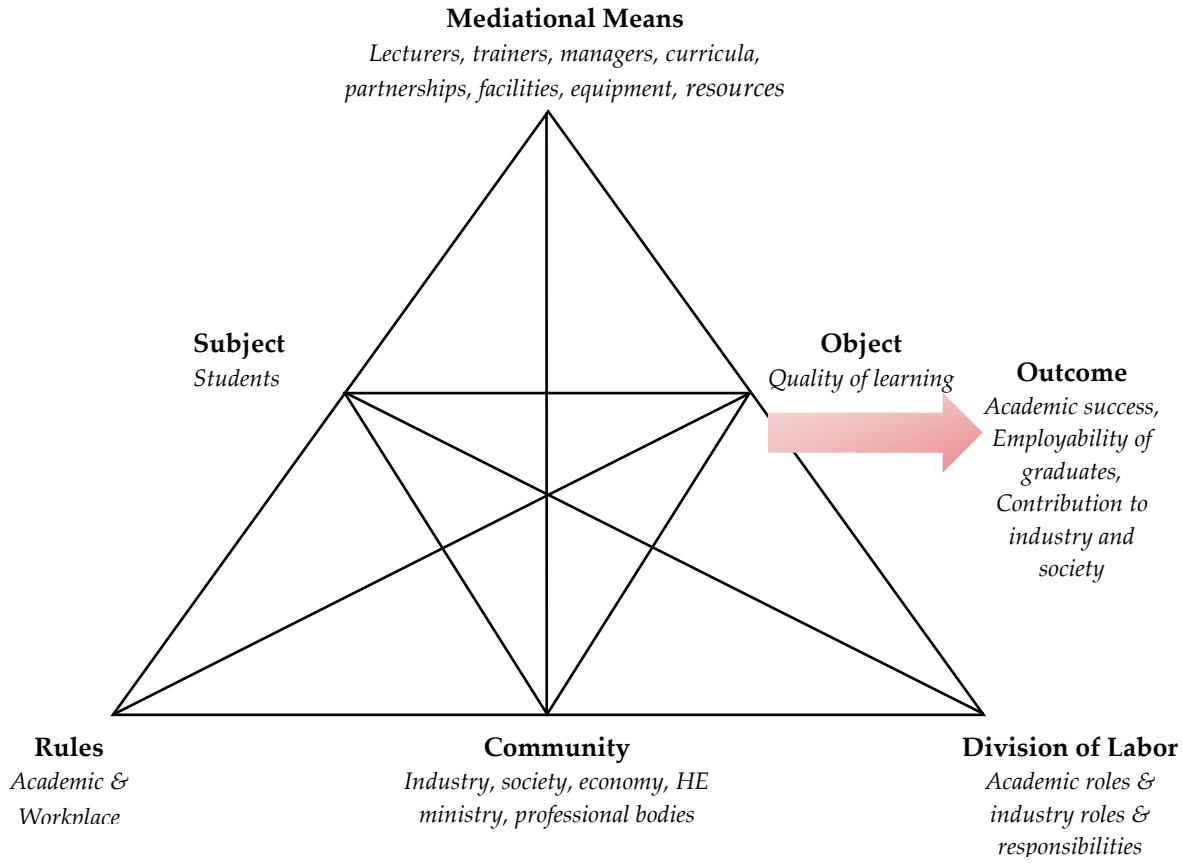
THEORETICAL FRAMEWORK: ACTIVITY THEORY

The particular focus in this study is a comparative analysis of WIL case studies for the purpose of learning from practices across contexts towards enhanced provision in the local context. Activity theory was chosen as the theoretical framework for the study because it raises awareness of the

importance of the larger system at work in the accomplishment of human activity (Engeström, 2014). Activity theory understands that human activity is always undertaken by subjects for a purpose, known in activity theory as the 'object'. The first principle of activity is that the object drives the activity (Engeström, 1999). In any educational activity system, the object is the quality of learning (Wells, 2004); in a WIL activity system, the object is the quality of WIL, which comprises specific learning attributes (Khampirat & McRae, 2016), for example, WIL introduces forms of learning into higher education in which theory and practice are more integrated than in traditional lecture-based learning (Zegwaard, 2014).

The dynamics involved in achieving the object, and how attainment of the object might be enabled or constrained, is known as the 'activity system' (Figure 1). Figure 1 shows the nodes of a WIL activity system. To work successfully on the object of high quality WIL, human and other resources, are required. The subjects in an educational activity system are the students, in this case, they are students on WIL programs. Achieving quality learning in WIL requires resources and a supportive environment (Augustsson, 2021). The 'mediational means' in the WIL activity system would include human, material, cultural and conceptual resources (Coldham, 2011). There are socio-material and cultural mediational means, including curricula, facilities, equipment, material and human resources. Lecturers, managers, workplace trainers and industry placement officers comprise the human mediators of the WIL activity system. The students and human mediators work as part of a much broader system of academic culture that has rules and hierarchies of decision-making. These rules and divisions of labor may enable or constrain the attainment of the object. It is important not to conflate the object and the outcome (Engeström, 2009, p. 56); an effective activity system must be driven by the object and not the outcome, the outcome flows from the activity as a whole. In the WIL activity system the students focus on attaining a high quality of learning; the outcome is that which results or flows from the focus on the object, such as employability. Activity theory explains that the outcome (in this case the success, employability and contributions of the WIL activity system) will be attained if the subjects focus on the object, which is the achievement of a high quality of learning. The necessary tools and resources need to be available, while logical rules and an appropriate division of labor should guide the system. The community of an activity system are those who are affected by the system, usually beneficiaries (e.g., a particular company, organization or industry more broadly), or stakeholders (e.g., government departments and professional bodies). While the community is affected by the system, they are not directly involved in the work of achieving the object.

FIGURE 1: A work-integrated learning activity system adapted from Engeström, 1999.



Khampirat and McRae found activity theory to be "a useful foundation upon which to consider the activity of a work term and the requirements of institutions, employer supervisors and students before during and after each work placement" (2016, p. 351). Augustsson (2021) found activity theory useful for analyzing and examining the complex nature of a WIL curriculum. Activity theory is pertinent to this study as its focus is development and change in activity systems arising from historically derived tensions in different organizational systems and across different contexts (Sannino et al., 2016). The history of the WIL activity system creates its culture and its stated and tacit rules. By studying the whole system, researchers can identify the interactions that subjects have to negotiate, as well as the tensions and contradictions arising from the interactions. Activity theory is a dialectic theory and the dialectic concept of "contradiction" plays a key part in it (Engeström, 1999; Virkkunen, 2009). Engeström proposes four levels of contradiction: primary, secondary, tertiary and quaternary. Primary and secondary contradictions have relevance for this study. Primary contradictions arise within the nodes of an activity system, for example, when the rules that govern the system are illogical; and a secondary contradiction arises when there is a mismatch between two nodes, such as when the mediational means are not fit for purpose (or object). Contradictions make the object a "moving, motivated and future-generating target" (Engeström & Sannino, 2010, p. 5). Finding contradictions or 'sticking points' in an activity system points to ways of improving practices within the system. In an activity analysis, such misalignments, contradictions and other disturbances "hold within them the possibility of the collective propelling themselves forward to search for new ways of doing and achieving what is not yet there" (Engeström, 2014, p. 95).

RESEARCH DESIGN AND METHODS: THE SOUTH AFRICAN AND IRISH CASE STUDIES

The researchers studied the contexts, mechanisms, outcomes and challenges of WIL through an investigation of WIL practices in South Africa and Ireland. A qualitative case study approach (Regehr, 2010) enabled the researchers to share WIL program and contextual data. The case study methodology afforded an in-depth examination of WIL as an activity system within specific contexts (Yin, 2014), each case being a WIL program. An understanding of WIL challenges, as well as possible solutions to address them, was developed through methods of data collection and consensus building, underpinned by relevant literature. A comparative analysis (Thomann & Maggetti, 2020) identified similarities and differences across the case studies. Ethics Approval was granted by the researchers' respective Institutional Ethics Committees.

A purposive sample of program cases was collected through networking activities within each of the higher education institutions. The sample included a range of undergraduate and postgraduate programs situated within the fields of business, engineering, biopharma and health sciences. Academics associated with WIL programs (e.g., course leaders and/or WIL coordinators) were invited to participate in the study. Potential participants were provided with clear and transparent information about the study and principles of informed consent and confidentiality were applied. Twelve program cases were collected in June 2020 within South Africa (n=6) and Ireland (n=6), using a case study template.

The case study template was designed to elucidate data about the program to enable the study of phenomena in context. Set out within four main sections (program context, WIL mechanisms and processes, WIL outcomes, and WIL challenges), participants were instructed to describe in detail the defining characteristics of the program and provide links to further relevant data, such as program websites or evaluations. A rich description of the environment was provided through details of the program content, background, nature of WIL, type of industry partners, student characteristics and program alignment with policy and legislation. Next, the nature of partnerships working at micro and macro levels, teaching, learning and assessment mechanisms, placement processes, monitoring, evaluation and student support, were described. Perceived outcomes related to WIL were reported relative to impact and/or benefits to students, employers and industry, the higher education institution, and society. Finally, the 'lessons learned' section invited participants to share their challenges of facilitating WIL in relation to student issues, working with industry and academic concerns.

An analysis of WIL case data was undertaken by the research team in three stages: 1) data management; 2) descriptive accounts; and 3) explanatory accounts. Data management involved documenting cases within a matrix see (Table 1) and conducting a cross-sectional thematic analysis within the key data categories that emerged across and within the studies. Activity theory was used to frame the comparative analysis of WIL practices in South Africa (ZA) and Ireland (IE). Descriptive accounts were developed within thematic charts; a process of summarizing key points of each piece of data, whilst retaining its context in terms of source and program characteristics, occurred. Similarities and differences relating to the elements of the WIL activity system were analyzed. The data analysis process involved all researchers engaging in on-line reflection, discussion, and consensus building.

TABLE 1: Work-integrated learning case studies.

Case	Program, Credits,* and WIL year	Field	Type of WIL
ZA1	Bachelor (Hons) (480 credits) Level 8/4th year	Health Science (professional)	Classroom-based WIL & clinical placements
ZA2	Diploma (360 credits) Level 6/2nd year	Business (tourism)	Work-based learning
ZA3	Diploma (360 credits) Level 6/2nd year	Engineering (civil)	Work placement
ZA4	Diploma (360 credits) Level 6/2nd year	Business (Somatology)	Simulation & work placements
ZA5	Diploma (360 credits) Level 6/2nd year	Business (Office Mgmt.)	Work-based learning
ZA6	Diploma (360 credits) Level 7/3rd year	Engineering (mechanical)	Project-based learning
IE1	Bachelor (Hons) (240 credits) Level 8/4th year	Engineering (mechanical)	Work placements
IE2	Master's degree (90 credits) Level 9	Business (marketing)	Work placements
IE3	Higher Certificate (120 credits) Level 6/2nd year	Science (lab technology)	New generation apprenticeship "Earn and Learn"
IE4	Bachelor's degree (180 credits) Level 7/3rd year	Science (lab technology)	New generation apprenticeship "Earn and Learn"
IE5	Master's degree (90 credits) Level 9	Health Science (professional)	Work-based learning
IE6	Post-graduate certificate (15 credits) Level 8	Business (Leadership)	Work-based learning

*1 European Credit is equivalent to 2 South African Credits

Limitations

The case study template as a method of data collection had limitations as it did not extend to all WIL beneficiaries and stakeholders.

FINDINGS: WIL ACTIVITY SYSTEMS IN SOUTH AFRICA AND IRELAND

The findings are presented in order of the nodes of the WIL activity system, with a focus on the similarities and differences across the South African and Irish contexts.

Subjects: Students Undertaking Work-Integrated Learning

In the majority of the South African case studies, the students were recent school-leavers and full-time students – with some exceptions. For example, in the Office Management program, it was reported that: "…most of the candidates are full-time students who enter the programme directly from school. Some students complete this programme on a part-time basis and may be more mature. Typically, the part-time students are already employed" (ZA5).

Many students were financially disadvantaged and were either "funded by the national bursary scheme" (ZA5), or by "SETA [Sector Education and Training Authority] funding [a government initiative] that assists with stipends for students" (ZA2). In the case of the diploma program in Tourism: "Employers assisting … with WIL are not obliged to pay the students a 'salary' since it is part of their qualification. We do however encourage employers to assist with a stipend, transport or accommodation costs "(ZA4).

In some cases, students were placed in teams, rather than individually, this was the case in an initiative that combined a final year project with WIL in Mechanical Engineering: "The student project teams were expected to meet regularly with their community partners; academic staff liaised with the community-based organizations, academic staff carried out their roles as supervisors of final year engineering projects" (ZA6).

The Irish programs served a wider range of students: from full-time school-leavers (IE1) to full-time employees (IE5), including some in fairly senior positions, who were described as ''assisting their organization to achieve success'' (IE6). Some students were "seeking [a] career change" (IE3; IE4); others were seeking to specialize and ''upskill within their professional role'', such as qualified nurses with several years' experience in clinical practice (IE5).

Both countries noted the diversity of their student bodies, including increasing numbers of international students in both contexts. International students in the South African context usually comprised students from other African countries.

Mediational Means: the Work-Integrated Learning Curriculum and Facilitators

A wider variety of WIL curricular modalities was noted in the South African context. WIL could "happen in the classroom and other learning environments" (ZA1) or be "infused across programs" (ZA4). Examples of WIL included: rotational clinical blocks (ZA1); simulation (ZA4); skills laboratories (ZA1; ZA2); project-based learning (ZA6); and work placements "on site or in the office of a contractor or consultant under the guidance of a mentor" (ZA3). In South Africa, WIL was generally offered during the second or third year of study within a diploma program, while in Ireland WIL was included at all levels from certificate programs to Master's degrees. There was a variety of curricular arrangements to accommodate student and employer needs at different levels, but work placements were the most common form of WIL in Ireland. Work placements included the following formats: "earn and learn" programs (IE4); "dual" programs comprising two days in college and three days in industry during the academic term (IE6); professional consultancies (IE2); and apprenticeships (IE3).

Both countries noted the need to prepare students for work placements through orientation and induction workshops, often provided by industry partners.

The efforts of several groups of people are necessary for successful WIL. In South African there were faculty and departmental WIL coordinators, academic staff, and a wide range of workplace partners, including: one-person companies; large multi-national companies; government departments; community-based organizations; state and private hospitals; and hotels, game-lodges, and spas. In Ireland, the mix of companies was more strategic: some programs had long-standing relationships with industry partners (IE1), while others were targeted for their long-term potential, such as the biopharma and food sectors (IE3; IE4).

WIL, in the form of work placements in industry, is not funded in South Africa, although other WIL modalities, such as project-based learning (if this is part of an academic subject), receive a subsidy. Mechanisms identified for funding work-based learning were: student bursaries; clinical training grants; and, if the work placement contributed to community engagement, a service-learning grant. Students' work placements were mostly unpaid, with stipends available in some cases. In Ireland, credit gained through work placements in full-time undergraduate programs, as well as subsidies allocated to the awarding institution, were equivalent to other credit-bearing subjects. In many (but not all) disciplines, work undertaken by a student in the host company was paid. Some courses aimed at those already in the workplace, while those who were unemployed attracted targeted government funding. In these cases, work placement was a requirement in support of students' employability.

Object: the Quality of Learning

In the South African case studies, quality learning involved: the application of "theoretical knowledge in the work environment" (ZA3); gaining "valuable experience" (ZA2); being exposed to "a variety of sectors" (ZA5); "building clinical competencies" (ZA1); becoming "part of the team" (ZA4); preparing students "to undertake more specialized and intensive learning" (ZA3); and making a contribution "to communities in need" (ZA6). In the health sciences, community service is a post-qualification requirement, as explained "Through [WIL] students are well prepared to work when they qualify. In South Africa all our health science students do community service" (ZA1).

The ethos that quality learning includes both development of the self and the development of others is deeply embedded in the South African context. This ethos was evident in most of the South African cases studies. The following description is an example of how individual benefit (employability) and societal benefit (productivity) are integrated in WIL:"WIL increases employability, which makes a positive contribution towards the productivity of South Africa's work force" (ZA2).

In the Irish case studies, quality learning included "learning by doing" (IE3; IE4); developing "high level knowledge and skills in order to establish a more solid foundation for a successful career" (IE2); and preparing for the future for example, though "final year industry inspired projects" (IE1). In postgraduate programs the majority of the learning was work-based and negotiated involving: "Structured academic and clinical supervision and negotiated practitioner development aligned with practice development" (IE5). The quality of learning was emphasized through benefits to self and work; ''Students research their own organization to suggest or implement change'' (IE6).

Outcome: Employability and Societal Contribution

Graduate employability was a key outcome in both contexts. In the South African context, the intended outcome was students' development of the necessary "ethics, responsibility and competency to function independently" (ZA3). It was noted that, in work placements, graduates quickly became "productive members of a business or an organization" (ZA5) and obtained "job offers through becoming known" (ZA1). In Ireland, the expected outcome was "job-ready graduates" (IE3; IE4) and practitioners who were "developing competence, developing relationships, becoming reflexive and being confident" (IE5). In Ireland, work placements are a part of practically all undergraduate programs and have been described by industry partners as "a long interview" which could result in a job offer after graduation.

Division of Labor: Roles and Responsibilities in Work-Integrated Learning

Partnerships between higher education and public or private sector partners were identified as key to successful WIL programs in both countries. Indeed, as one case study points out: "The quality of the WIL training is dependent on the individual qualified staff at the sites" (ZA4). In the South African case studies, there were examples of formal agreements between the university and a company (ZA3) or hospital (ZA1), such as a memorandum of understanding that stipulated the division or labor, or roles and duties of the higher education and industry partners. There were also examples of "informal agreements" (ZA4). The Irish case studies similarly included both formal (IE5) and non-formal arrangements with partners, the latter usually arising from "long established relations with companies" (IE1). The responsibility of assessing the students, was a contentious issue in both South African and Ireland. In formal or informal agreements, it was usually understood that the task of assessing students would be shared between academics and industry supervisors or clinical educators. In practice, however, it was more often the academics who conducted assessments and/or made final judgments.

Community: the Work-Integrated Learning Beneficiaries

In both contexts, there was socio-economic benefit that resulted from students' enhanced learning and preparation for the workplace. The South African case studies showed that both industries and the broader society were important beneficiaries. Some work placements were described as "in essence a six months' interview in their work environment that reduces the risk of new appointments significantly" (ZA2), and thus of considerable value to potential employers. In a Somatology diploma: "the final year WIL students become part of the team and contribute to the service delivery in the salon/spa where they work," but also contribute to "the GDP of our country …the economic and social benefits [of WIL] are endless" (ZA4).

Students in mechanical engineering contributed to:

> 'small' non-governmental organizations and community-based organizations, such as an organization involved in the supply of solar water geysers (an initiative of the South African Ministry of Minerals and Energy), an organization involved in water and sanitation services, an automotive repair cooperative, and other similar small scale local initiatives. (ZA6)

In office management: "Community support and engagement are extremely important and this is one of the key factors in successfully implementing WIL. By co-operating and collaborating with different partners in the surrounding community, WIL supports local partners" (ZA5).

The societal contribution was clearly visible in the health science:

> All of our [radiation therapy graduates] are employed into Community Service posts. This is an immediate benefit to the radiotherapy service and ultimately to society. The economic contribution is less clear but there is a strong and valuable contribution to society and the people of South Africa – especially to persons with cancer who benefit from treatment. (ZA1)

The Irish case studies similarly understood that the beneficiaries of WIL included industries, the broader economy and the students themselves. Innovation in the work place, graduate employability and the growth of industry were exemplified.

From an industry perspective, multiple benefits were identified: "To date students have redesigned work teams, implemented mentoring and coaching programs, improved selection processes and initiated employee engagement programs" (IE 6).

Economic and student benefit was understood through graduate employability within the sector: "Given the fact that almost all of our Mechanical/Biomedical Engineering graduates go on to careers in the manufacturing sector (frequently in the medical device and pharma sectors), there is clearly a positive economic outcome from work placement" (IE 1).

Additionally in Ireland, WIL contributed towards building a sector (IE2):"Marketing is focused on generating and meeting demand in an environment that introduces customers to suppliers. The more this that is done, the easier it is for businesses to grow" (IE2).

In healthcare the benefits to employers (and ultimately society) related to ''knowledge sharing… improving patient care'' through ''evidence based practice projects and innovative practice improvements'' (IE5).

Rules Governing Work-Integrated Learning

In both contexts, there were rules regarding entrance requirements for the WIL program, its duration, assessment and accreditation. Entrance criteria were dependent on the level of the program and the type of WIL offered: in one case, "marketing exposure in the work place" (IE2) was required. The time required for WIL varied according to level and discipline: in some cases, there were rotational blocks of practice across the program (ZA1; IE6); some programs required three months of practical experience in the third year of study (ZA5); in other cases, there was a six-month placement at the end of the third year of study (ZA2); and in yet other cases, two work placements were required, each with a minimum duration of 24 weeks (ZA3). In Ireland there was a similar range, such as a six-month second semester placement in an honors program (IE1), second semester work-based projects in a Master's degree (IE5) and flexible arrangements for employed students (IE4). Several forms of assessment were used, with work logs (often the basis for oral or written reports) and checklists dominating in the South African context. By comparison, it was noted that there was a wider variety of forms of assessment in the Irish context, including reflective journals "to capture the ongoing learning and the application of the learning to the workplace" (IE6). WIL programs in professional contexts, such as health sciences and engineering were usually accredited by a relevant professional council.

DISCUSSION: CONTRADICTIONS IN THE WIL ACTIVITY SYSTEMS

Findings across the case studies were synthesized, focusing on the contradictions in the activity systems. These "sticking points" (Engeström, 1999, p. 28) in the activity system are understood by activity theorists as key areas for learning and change.

The Right Tools for the Job

Compared to classroom-based teaching, WIL is resource-intensive; thus, to achieve the object of quality learning, a range of resources, including human, material and educational resources, are required. Even "marking of assessments is more difficult and time consuming" (ZA2). In this regard, two secondary contradictions were identified: 1) those between mediational means and object; and 2) those between mediational means and community.

Work placements are not funded through the South African higher education subsidy system, thus academic departments that were committed to work-based learning, often struggled with implementation. For example, due to financial constraints, it was not always possible to visit all students at their work sites (ZA3; ZA4), provide them with work uniforms (ZA4), or transport (ZA5; ZA6). Students thus experienced several challenges:

> Even those students who receive bursaries seldom have funding that covers all costs. This means that we have students who can be hungry, lack adequate resources to study e.g. laptops (this is highlighted now with the COVID-19 pandemic) and struggle to fund attendance for [workplace learning]. (ZA1)

Far fewer resource challenges were noted in the Irish context, suggesting that quality WIL provision was more achievable. The South African system was, however, resilient and adaptable, as could be seen in the shift to from unfunded work placements to funded engineering projects (ZA6), or in arrangements made for students to receive stipends from larger companies (ZA7).

A second contradiction identified in the activity analysis was between mediational means (in the form of human resources at the sites of practice) and communities (in the form of local, regional and national beneficiaries). The survival of WIL was "dependent on industry providing the places for the apprentices" (IE3). Where partnerships were tenuous, there was uncertainty about the availability of placements (ZA3), mentors (ZA2) or workplace training for students (ZA5). If an industry partner cancelled a work placement, "contingency measures" were "difficult to design" (IE2). The many logistical issues of partnerships had to be managed in both contexts. However, when agreements were supported by national and regional governments and professional bodies, it was more likely that the partnership would be long-term, sustainable and more predictable. Achieving sustainable partnerships was thus dependent on a strategic view of partnerships, such as identifying and building relationships with key industries at regional and national levels, rather than being driven by short-term logistical issues such as an immediate need to find placements for students.

A contradiction between mediational means, in the form of qualification level and industry needs was also identified. The range of qualification levels in work placements in the Irish context was contrasted with the predominantly diploma-level qualifications in the South African context (with the exception of the health sciences). This meant that a full range of professional levels beyond mid-level practitioners and technicians in the South African context was not available for WIL. Consequently, the contribution to industry and society that a broader range of qualifications would offer was not possible. In Ireland,

the greater range of qualifications enabled WIL provision across occupational levels and, as a result, offered broader socio-economic contributions.

Support for Work-Integrated Learning Students

Students in work placements are often not fully prepared to engage in WIL, which suggests a primary contradiction at the subject node. Resolving this contradiction entailed appropriate student support. In the South African context, the majority of students were school-leavers who struggled "to adapt from academic to practical work environments" (ZA2). They were "often overwhelmed by the intensity and the increased work tempo" of the workplace (ZA4), while social differences and language barriers created additional challenges (ZA5). In Ireland, because many of the students were mature or employed students, they experienced the challenges of "managing family, work and study commitments" (IE5), while for many "the return to academic life, especially at level 8 [Bachelor Hons], was a challenge" (IE6). While the challenges and the types of support necessary differed across the two contexts, the case studies demonstrated the need for student support in WIL programs.

Academia Rules

All the case studies emphasized the centrality of workplace partners, but it was the academic partners who set the rules. Academics understand disciplinary knowledge, but tend to distrust working knowledge which, as activity theorists point out, is about "learning what does not yet exist" (Virkkunen, 2009, p. 157). There is thus a primary level contradiction in the 'rules' that govern the activity system, namely that work practice has to meet academic requirements. The entry requirements and the credits for work placement were determined by academic rules. Academics could dispute the number of hours linked to a work placement (ZA1), or prioritize the academic program when timelines were in conflict (IE1). The dominance of the academic rules was particularly evident in the assessment of WIL and understandings of what fair and accurate marking practices might entail. While a program might be "designed by industry for the needs of industry" (IE3; IE4) and co-assessed by both academics and industry partners, final decisions were usually made by the academics. Case studies in both contexts pointed out that "industry and academic assessment are not always aligned" (IE1) and that making "fair assessments" was challenging (ZA2). A key academic challenge was the balance between meeting community needs and meeting the required academic level.

While the primary and secondary level contradictions are difficult to resolve, and express the complexity and ambiguity that is a consequence of bringing work practices and the practical knowledge gained in workplaces into academia, they point to ways in which the activity system might need to change in order to support the development of students' personal and professional attributes, such the agility, resilience, and adaptability that will be required in future work places and practices.

CONCLUSION: LESSONS LEARNED TOWARDS ENHANCING WIL PRACTICE

The study set out to address the research question: How might sharing experiences of WIL in different contexts enhance WIL practice in a local context? The intention of the study was to compare and analyze WIL practices in South Africa and Ireland in order to learn from one another's practice. In order to learn across contexts, it was necessary, as Eames and Cates (2011) put it, to engage in "strengthening of the theoretical foundations" of WIL (p. 45), in this case, drawing on activity theory to reveal the contradictions the WIL activity systems in the different countries. Activity theory enabled a systematic analysis that provided insights in how local practices could be enhanced.

Enhancing Work-Integrated Learning in the South African Context

A key learning was that a one-size-fits-all approach to WIL is unlikely to benefit students or industries. The South African National Qualifications Framework allows for WIL at all levels (from basic certificates to doctoral degrees), thus the full range of qualification levels needs to be explored. The case studies in the South African context emphasized the benefits that WIL brought to workplaces, and communities in need, as well as broader socio-economic benefits. These benefits were not always clearly articulated by participants and it would be useful to quantify the benefits more precisely. Given that resource constraints will continue for some time in South African higher education, quantifying the benefits to industry would make a strong argument for obtaining industry funding, while the benefits to communities in need might attract state funding.

Enhancing Work-Integrated Learning in the Irish Context

From the Irish perspective, WIL is supported by government initiatives, funding and positive policy positioning; the benefits of which being clearly articulated within the Irish case studies. However there remains much to be learned in the delivery and support of WIL during times of challenge such as the COVID-19 pandemic. Greater attention to the role of mediational means, such as digital tools and supports, has the potential to enhance WIL within the activity system, and is an area that requires further investigation.

Contribution to Knowledge

The contribution to knowledge that the study offers is an understanding of the WIL activity system, including the ways in which the different nodes of the system impact the system as a whole, enabling or constraining the achievement of the object and the outcomes that flow from it. Activity theory alerted us to systemic issues in WIL, in particular the contradictions arising from bringing work practices and knowledge into academia. These contradictions point to potential ways of enhancing WIL practice.

Where Further Research is Needed

The multi-disciplinary collaboration will continue to research WIL programs in South Africa and Ireland for the purpose of learning from practices across contexts to enhance the provision of WIL in specific, local contexts. Future research work is intended to engage additional stakeholders, such as industry partners and students, towards improving WIL in both countries. While WIL is well embedded within undergraduate programs in Ireland, there are more recent developments in the integration of WIL into doctoral learning pathways. Recognizing that doctoral graduates will no longer expect to transition into academic roles, WIL provides an opportunity to enhance employability skills and to develop professional identities. Master's and doctoral levels of WIL provision provide an opportunity for mutual learning, in particular how WIL could support the development of doctoral candidates' research and innovation capacity. In South Africa, socio-economic disadvantage and the struggle for socio-economic justice made visible dynamics that are not so obviously at play in the Irish context. Social inequalities are easily reproduced in education, including WIL. A gap that both teams could address are the theoretical assumptions that underpin WIL in the different contexts, as well as how WIL practitioners could provide evidence of the transformative potential of WIL towards a productive and just society.

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About the Journal

The International Journal of Work-Integrated Learning (IJWIL) publishes double-blind peer-reviewed original research and topical issues dealing with Work-Integrated Learning (WIL). IJWIL first published in 2000 under the name of Asia-Pacific Journal of Cooperative Education (APJCE). Since then the readership and authorship has become more international and terminology usage in the literature has favored the broader term of WIL, in 2018 the journal name was changed to the International Journal of Work-Integrated Learning.

In this Journal, WIL is defined as "*an educational approach that uses relevant work-based experiences to allow students to integrate theory with the meaningful practice of work as an intentional component of the curriculum. Defining elements of this educational approach requires that students engage in authentic and meaningful work-related task, and must involve three stakeholders; the student, the university, and the workplace*". Examples of practice include off-campus, workplace immersion activities such as work placements, internships, practicum, service learning, and cooperative education (Co-op), and on-campus activities such as work-related projects/competitions, entrepreneurships, student-led enterprise, etc. WIL is related to, but not the same as, the fields of experiential learning, work-based learning, and vocational education and training.

The Journal's main aim is to enable specialists working in WIL to disseminate research findings and share knowledge to the benefit of institutions, students, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that leads to the advancement of effective practices, development of further understanding of WIL, and promote further research.

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Types of Manuscripts Sought by the Journal

Types of manuscripts sought by IJWIL is primarily of two forms: 1) *research publications* describing research into aspects of work-integrated learning and, 2) *topical discussion* articles that review relevant literature and provide critical explorative discussion around a topical issue. The journal will, on occasions, consider good practice submissions.

Research publications should contain; an introduction that describes relevant literature and sets the context of the inquiry. A detailed description and justification for the methodology employed. A description of the research findings - tabulated as appropriate, a discussion of the importance of the findings including their significance to current established literature, implications for practitioners and researchers, whilst remaining mindful of the limitations of the data, and a conclusion preferably including suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical and scholarly discussion on the importance of the issues, critical insights to how to advance the issue further, and implications for other researchers and practitioners.

Good practice and program description papers. On occasions, the Journal also seeks manuscripts describing a practice of WIL as an example of good practice, however, only if it presents a particularly unique or innovative practice or was situated in an unusual context. There must be a clear contribution of new knowledge to the established literature. Manuscripts describing what is essentially 'typical', 'common' or 'known' practices will be encouraged to rewrite the focus of the manuscript to a significant educational issue or will be encouraged to publish their work via another avenue that seeks such content.

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