

# **Overcoming collaboration barriers in work-integrated learning: a framework for employer-university curriculum partnership**

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## **Abstract**

**Purpose** - This study analyses drivers of WIL (work-integrated learning) curriculum collaboration barriers between employers and universities, presenting a new framework for curriculum collaboration success. This research is topical in exploring institutional and cultural barriers hindering WIL curriculum collaboration, framed against significant societal and economic change driving WIL collaboration.

**Design/methodology/approach** - This qualitative study utilises phenomenological design. We analysed extensive literature sources reviewing current WIL curriculum collaboration practice, followed by data collection involving 32 semi-structured interviews with UK academics and employers engaging in WIL. Purposive sampling was used to select research participants relevant to the research topic. Thematic analysis identified key themes and coding categories relating to collaboration barriers to WIL curriculum co-design.

**Findings** - Effective WIL curriculum collaboration positively impacts students, employers and universities, facilitating enhanced work-integrative skills. Interview analysis revealed widespread appetite for WIL curriculum collaboration, tempered by structural and cultural barriers, including institutional structures hindering learner skills development, inadequate reward processes, and misaligned collaborative

expectations. This study presents a new connective framework for applied practice in tackling partnership barriers for effective industry-university WIL curriculum collaboration.

**Originality** - This research is original in researching both employer and university views on WIL curriculum collaboration. The findings generate value through more connective partnership conceptualisations of WIL curriculum collaboration.

**Practical implications** - The practical research implications and insights will benefit employers and universities in overcoming collaborative barriers and adopting more connective frameworks for effective WIL curriculum design partnerships.

**Keywords** Work-integrated learning; curriculum design; employability; employer-industry.

**Paper Type** Research Paper

## **Introduction**

### ***Background to the Study***

Economic policy drivers are increasingly inspiring universities to collaborate with industry on work-integrated learning (WIL) curricula, to prepare graduates effectively for the future workplace. With increasing expectations from policymakers to ensure curriculum alignment with industry standards for successful graduate outcomes (Nawaz, 2023), universities are expected to build excellent workplace knowledge and skills through WIL curriculum design. WIL indicates activities integrating academic study with authentic work experiences to enhance learner professional skills and employability. WIL involves partnerships between educational institutions, learners, and external stakeholders, providing structured opportunities applying theoretical knowledge in real-world settings, therefore providing learners with highly authentic occupational experiences.

### ***Problem Statement***

Universities and employers are under pressure to build industry needs into WIL curriculum design, to enhance learner employability and future workplace transferable skills (Atfield *et al.*, 2021). Governments are increasingly acknowledging that university-industry collaboration is vital to address skills gaps and enhance graduate employability (Bari, 2025). Universities worldwide are expected to engage with employers to develop WIL curricula enhancing learner employability and transferable skills (Atfield *et al.*, 2021), and facilitating positive WIL experiences and outcomes (Jackson *et al.*, 2025).

However, although positive examples of WIL curriculum collaboration exist, including degree apprenticeships, there is limited research evidence that WIL curriculum collaboration is yet effectively integrated into university-industry partnerships. Many

research sources into university-industry collaboration focus on enterprise and innovation, yet collaboration around WIL curriculum design between academics and employers has received less research attention. Where such research exists, it shows that collaborative WIL curricula design can address changing industry needs, and hone graduate employability skills (Jackson, 2012).

There is however still little evidence of systematic WIL curriculum collaboration partnerships (Cantafio and Ikoawaji, 2022). Academic requirements can often prove rigid or misaligned with industry needs, resulting in WIL programs poorly integrated with workplace realities, reducing the quality of student learning experiences, and highlighting core tensions in WIL partnerships between universities and employers. Research by Pereira *et al.*, (2020) shows academics exerting internal status power to resist reaching out to employers for curriculum collaboration, preferring to exercise internal authority over WIL curriculum design, or incorporating specialist theory associated with their research interests, rather than resolving mismatches between curriculum and labour market demands.

This demonstrates why collaboration in WIL is difficult, making this study both relevant and urgent. As long as such collaborations occur without a structured model, they remain ad hoc and dependent on individual transitory relationships rather than sustainable institutional strategies using more structured collaborative frameworks. This is reinforced by research showing academics often believe employer relationships are the responsibility of careers staff, with academics responsible only for teaching and research (O'Leary, 2013).

The purpose of this study is therefore to explore this knowledge gap, by analysing key barriers in WIL curriculum collaboration between industry and universities.

### ***Significance of the Study***

The study demonstrates significance and originality in researching in depth the views of both employers and universities concerning WIL curriculum collaboration barriers. It extends existing frameworks for university-industry collaboration, including Collaborative Advantage Theory (Vangen and Huxham, 2013), and Kroon and Franco's Employer Perspectives Model (2022). The study findings create significant value through presenting a new framework for connective WIL curriculum collaboration. The study's practical research implications and insights add value in offering more collaborative frameworks for effective WIL curriculum design to enhance future graduate workplace skills.

For universities, the new framework arising from this research may facilitate improved identification and minimization of barriers to engaging in effective employer collaboration for improved WIL curriculum currency and graduate outcomes. For employers, this research may enable better understanding of how to collaborate effectively with universities for WIL curriculum relevance, for accessing talent pools of graduates with highly transferable employability skills based on authentic WIL curricula. Both universities and employers can utilise the findings for more effective WIL curriculum collaboration to support initiatives such as the UK national skills agenda, to improve workforce readiness across industries recruiting university-educated graduates (Skills England, 2025).

### ***Study Aims & Objectives***

The overall aim of this research study was to analyse WIL curriculum collaboration barriers between employers and universities, with the objective of improving the effectiveness of WIL curriculum collaboration. The study commences with contextual barriers to WIL curriculum collaboration, and a literature review of key characteristics of effective curriculum partnerships. The study then considers findings of 32 in-depth

research interviews with industry and academics concerning WIL curriculum collaboration barriers. We then discuss strategies for overcoming WIL curriculum collaboration barriers, and conclude by presenting a new connective collaborative framework for employer-university curriculum co-design.

## **Literature Review**

The literature review focused on collaborative barriers to curriculum co-design between universities and employers engaging in WIL, which informed the conceptual connective framework developed at Figure 2. In terms of relevant theoretical concepts, Collaborative Advantage Theory (Vangen and Huxham, 2013) was used for theoretical study grounding, providing a conceptual lens for understanding the complex phenomena involved in industry-university curriculum collaboration. This underpins the theoretical conceptualisation that organisations can achieve superior, synergistic outcomes difficult to reach alone by combining expertise and knowledge with partners, such as curriculum collaboration in this study. Valuable goals are best attained through collaborative effort, balancing partnership benefits with the challenges of structural and cultural barriers such as inertia sometimes found in university-industry relationships. This theory posits tensions between synergies created through collaborative working, versus tendencies for collaborative initiatives to be beset by inertia and conflict, a theme which emerged in both the study literature review and qualitative research. Grounding this study in Collaborative Advantage Theory was therefore relevant to enhance the study's validity, connecting its findings to established knowledge, and supporting development of the framework at Figure 2 for overcoming curriculum collaboration barriers in employer–university WIL partnerships.

The literature review took a purposive approach to searching for new insights from academic journals, books, peer-reviewed articles, and industry reports. Literature

reviewed identified increasing interest in university-employer WIL curriculum collaboration, driven by desire to improve knowledge transfer and graduate employability skills (Jackson, 2013). However, this is often beset by barriers to curriculum collaboration such as role misalignment and workload resourcing (Cotronei-Baird, 2020). Such barriers cluster primarily around three themes - discipline-specific institutional structures hindering skills development (Cantafio and Ikoawaji, 2022), lack of collaborative resource and reward processes (Hansen and Daniels, 2023), and misalignment of collaborative roles and expectations (Kroon and Franco, 2022).

### ***Discipline-specific institutional structures hindering interdisciplinary skills development***

Universities have traditionally delivered WIL curricula via subject-based disciplines (Cantafio and Ikoawaji, 2022). However, if curricula are overly focused on specialist subject areas, this can leave WIL learners unprepared for cross-functional skills needed for work-based collaboration (Cantafio and Ikoawaji, 2022). Clayton and Clopton (2019) recommend universities invite employers onto curriculum advisory boards to collaborate on cross-disciplinary curriculum design, incorporating future skills to improve learner employability prospects. Similarly, Lowden *et al* (2011) found that when employers proactively design curricula with universities, curriculum board participation facilitates meaningful cross-disciplinary curriculum collaboration, identifying new technical work-integrated skills. To date, however, cross-disciplinary structures and employer involvement on university curriculum advisory boards are still not commonplace.

Institutional hierarchies also create structural barriers to cross-disciplinary WIL curriculum collaboration, with employer-industry focused skills-based models by

Jackson (2021), Fung (2017) and Tomlinson (2017) evidencing the need to tackle such barriers. UK degree apprenticeships are an area where effective curriculum collaboration between universities and employers is essential (Nawaz, 2023). Apprenticeship providers must work collaboratively with employers to determine professional competence curriculum standards and skills, as evidenced by Guild HE (2018) and Nawaz (2023). Collaborative co-creation of standards and curricula underpins learner development of subject-based knowledge, but also relevant cross-disciplinary work behaviours and attitudes (Nawaz, 2023). Similarly, WIL degree apprenticeship programme collaborative design requires interdisciplinary collaboration, to interlink academic practice with industry experience (Guild HE, 2018). Research in Jacob *et al* (2022) observed that postgraduate curricula developed collaboratively such as professional doctorates are often career-specialised and “double badged” with professional chartered status, integrating taught modules with professional career development, requiring close collaboration between academics and employers (Jacob *et al.*, 2022).

WIL curriculum design collaboration is increasingly recognised as key for bridging higher education with industry, with Major (2016) arguing that WIL co-designed with employers helps learners reflect on their own professional practice:

The idea of taking the university into the workplace is increasingly common, that benefits growth in knowledge and social capital. (Major, 2016) (p.18)

Universities and employers also need to consider newer cross-disciplinary WIL curriculum formats, with Jacob *et al.* (2022) highlighting new taxonomies of lifelong learning and microcredentials in WIL environments. In practice, however, there are limited research examples of universities proactively involving employers in cross-disciplinary WIL microcredential collaborative design. Jackson (2012) also recommends involving employers proactively in cross-disciplinary WIL curriculum

collaboration to hone new employability skills and standards, including problem solving (Jackson, 2013).

Interdisciplinary work-integrated skills in curriculum design are also important for Fung (2017), who emphasises workplaces can be messy and lack alignment with theories taught in universities. Fung asserts that cross-disciplinary connectedness between academics and employers provides throughlines of enquiry, helping learners build work-integrative narratives, and articulate practical connections with lifelong learning in preparation for the workplace. Carlile *et al* (2016) also emphasise academic knowledge should be underpinned by cross-disciplinary intellectual agility and 'skills of emotional, contextual and cultural intelligence to anchor leadership ability that employers seek' (Carlile *et al.*, 2016) (p.5). The need to overcome institutional barriers to social and cultural capital also underpins Tomlinson's Graduate Capital Model (2017), articulating that learners acquire different types of capital through real-world experiences. Tomlinson's model recognises that different forms of capital are interconnected, so learners should invest in these capitals through cross-disciplinary curricula to optimise career prospects.

The above discussion demonstrates increasing pressure for universities and employers to tackle institutional barriers to cross-disciplinary collaboration in WIL curriculum design, align learner skills with employer expectations, and secure adequate resource, as discussed below.

### ***Lack of Collaborative Resource and Reward Processes***

WIL curriculum collaboration can be derailed by lack of resource and reward processes, with Cotronei-Baird (2020) arguing that lack of incentives for industry collaboration within universities results in WIL learner deficits in acquiring key employability skills, and that as learners often study while working, WIL must occur

where and when convenient for both learners and employers. Mburayi and Wall (2018) show that integrating key industry principles such as sustainability into WIL curricula is more effective through engagement with non-academic stakeholders. However, Jackson (2013) argues that academic and employer curriculum design collaboration places significant burdens on universities not always sufficiently resourced, with universities incentivising insufficient academic staff to resource employer relationships (Guild HE, 2018).

Applied assessment is a further area where curriculum authenticity enables WIL learners to replicate work tasks and reflect on skills (Hansen and Daniels, 2023). The importance of authentic applied feedback is emphasised by Jackson (2013), through incentivising employer-academic collaboration, ensuring seamless skills transfer to the workplace. Assessment authenticity can involve local business communities in collaborative co-production, providing students with consultancy-style opportunities to develop employability skills (Fletcher-Brown *et al.*, 2015).

Overall, lack of resource and reward processes for curriculum collaboration represent key barriers to WIL curriculum design, further aggravated if curriculum collaboration roles and expectations are misaligned, as discussed below.

### ***Misalignment of collaboration roles and expectations***

Lack of alignment between roles and expectations in WIL curriculum collaboration can present cultural barriers to university-industry knowledge exchange, and to learner workplace skills development (Kroon and Franco, 2022). Although many employers have positive WIL university relationships, few appear directly connected into WIL curriculum collaboration, as it is often unclear whether employers or academics should bear primary responsibility for developing WIL curricular relationships. Jackson (2013) asserts that employers frequently regard WIL design as the responsibility of

universities, whereas academics sometimes regard WIL curricular skills development as detracting from on-campus teaching and research. Daubney (2022) also found universities regarding embedding employability through curriculum collaboration as threatening academic rigour.

Regarding curriculum expectations, Jackson and Chapman (2012) found that universities can view employer wishlists of WIL competences as unrealistic, with misalignment of roles and expectations between universities and employers even in short-term WIL such as placements, through insufficient collaborative planning. Kroon and Franco (2022) also found employers often identify only weak collaborative ties with universities providing WIL opportunities. This indicates new approaches are needed to align roles and expectations around curriculum collaboration.

Overall, the literature shows drivers for WIL curriculum collaboration growing, particularly where academics and students benefit from employer expertise. However, key barriers to collaboration exist, particularly discipline-focused institutional structures and systems, lack of resource to support curriculum collaboration, and misalignment of collaborative roles and expectations between academics and employers.

## **Methodology**

### ***Research Design***

The overall research aim was to achieve phenomenological insight into collaboration barriers between industry and universities in WIL curriculum design, and approaches to tackling such barriers. As this research explored industry and university opinions of curriculum collaboration, it aimed to uncover attitudes and perceptions, driven by interpretivist ontology. An ontologically relativist perspective was adopted to construct reality from participants' subjective experiences, with the research design adopting an

interpretivist epistemological approach (Jegede, 2021), creating meaning from individuals through their curriculum collaboration experience. Phenomenology aligned with the study research aims in studying individual lived experiences of curriculum collaboration and informing how that experience is understood (Neubauer *et al.*, 2019). Phenomenology as the primary qualitative research approach underpinning this study seeks to explicate meanings from participants' lived experience in their everyday existence (van Manen and van Manen, 2021), a crucial requirement when exploring the lived experience of WIL curriculum collaboration between employers and academics. Husserlian reflexive methodology enabled bracketing out prior knowledge causing bias (Jackson and Cox, 2020). Participant intentionality allowed participants to raise broader issues around collaboration experiences (van Manen and van Manen, 2021).

### ***Research Participants***

To meet the study aims a qualitative research approach was used to identify themes, rather than a quantitative research process for testing hypotheses (Miles *et al.*, 2013). As phenomenological research requires respondents with meaningful experience of phenomena under investigation, purposive sampling was used for selecting research participants relevant to the research topic (Greener, 2008). Key stakeholder groups were sampled across 32 interviews, incorporating eight employers, four PSRBs (Professional Statutory and Regulatory Bodies), and 20 academics involved in WIL curricula. Participants were chosen using selection criteria reflecting the need for experience in WIL and curriculum considerations. Table I shows participant demographic characteristics:

**Table I – Research Participants**

<b>Participant Code</b>	<b>Profession</b>	<b>Area of Specialism</b>
U1	Academic	Business Management
U2	Academic	Marketing
U3	Academic	Marketing
U4	Academic	HR
U5	Academic	Economics
U6	Academic	Business Management
U7	Academic	Marketing
U8	Academic	Business Management
U9	Academic	Business Management
U10	Academic	Marketing
U11	Academic	Project Management
U12	Academic	Business Management
U13	Academic	Business Management
U14	Academic	Marketing
U15	Academic	HR
U16	Academic	Business Management
U17	Academic	Business Management
U18	Academic	Business Management
U19	Academic	Business Management
U20	Academic	Marketing
E1	Employer	Project Management
E2	Employer	Business Management
E3	Employer	Public Relations
E4	Employer	HR
E5	Employer	Accountancy
E6	Employer	Insurance
E7	Employer	Business Management
E8	Employer	HR
P1	PSRB	Marketing
P2	PSRB	Business Management
P3	PSRB	Accountancy
P4	PSRB	Marketing

(Author's own work, 2025)

### ***Data Collection Methods***

Qualitative research design, recruitment and interviews ran over seven months up to January 2024. Semi-structured 30-minute in-depth interviews were used to allow employer, academic and PSRB participant expansion on responses and nuanced understanding of participant behaviour (Roller and Lavrakas, 2015). Interview questions were developed from gaps in existing knowledge from the literature review. Open-ended questions allowed participants to address those gaps using their own frame of reference and preferred terminology (Wilson, 2012). Theoretical concepts from Collaborative Advantage Theory (Vangen and Huxham, 2013) concerning collaborative partnerships and inertia tensions guided development of research questions and data collection, enabling systematic, theory-driven analysis of the findings. Interview questions were therefore as follows:

- How participants initially recognise the need to collaborate on work-based curricula;
- Whether participants start their curriculum collaboration journey via more general collaborations;
- Which aspects of curriculum design and delivery participants collaborate on most frequently;
- How participants maintain curriculum collaboration relationships;
- How participants characterise their practice and experience of curriculum collaboration;
- Aspects of effective curriculum collaboration which work well.

Interviews were conducted by the primary researcher, and recorded in video file format using Microsoft Teams software.

### ***Data Analysis***

Verbatim transcripts were created from interviews. NVivo software was used to support results coding by frequency and intensity of participant themes. Initial analysis produced 50 codes at open coding stage. These were thematically merged and aggregated to produce 48 themes at axial coding stage, resulting in five superordinate themes each with 3-5 subordinate themes with 31 associated sub themes. Thematic analysis (Clarke and Braun, 2017) was used to analyse interview data, as this approach is used within qualitative paradigms, providing an organic approach to coding and theme generation. Codes developed out of the interview data acted as building blocks for themes, underpinned by the core research concept of the practice and experience of curriculum collaboration barriers by participants. Table II summarises key superordinate and subordinate research themes:

**Table II - Interview Superordinate & Subordinate Themes**

<b>Superordinate Theme</b>	<b>Subordinate Themes</b>
1. Factors Driving Curriculum Collaboration & Relationship Building	Changing collaborative role of universities
	Graduate employability
	Initiating curriculum collaboration
2. Collaboration in Curriculum Design & Delivery	Collaboration & planning in curriculum design
	Accredited & ranked courses
	Collaboration in curriculum delivery
3. Maintaining Long Term Collaborative Relationships	Issues maintaining relationships
	Contact capture & sharing
	Advisory boards
	Alumni role
4. Key Benefits of Curriculum Collaboration	Student value
	Win-win common goals
	Local/civic collaboration
5. Key Areas of Improvement for Curriculum Collaboration	Removing collaborative relationship barriers
	Mismatches in mutual understanding
	Improving student engagement
	Overcoming academic negativity
	Resolving resource & workload challenges

(Author's own work, 2025)

## ***Trustworthiness***

Trustworthiness of the research was assured by adhering to Lincoln and Guba's (1985) criteria for research credibility and confirmability, through referential adequacy, and provision of sufficient descriptive data to allow users to evaluate applicability of the data to other contexts. Tracy's (2010) 'big-tent' criteria for qualitative research were adopted to assure reliability and dependability, including topic worthiness, and timeliness of the research in a changing higher education WIL environment. Principles of aesthetic authenticity (Guba and Lincoln, 1989) were used for valid transferability of research findings, through reproducing and referencing authentic participant expressions of findings so as to evoke credible responses from research users.

## ***Ethical Considerations***

The research study was initially given ethical approval by the Ethics Committee of the author's previous institution of affiliation, following author submission of an Ethical Approval Application. Following transfer of the author and research study to the current institution of affiliation, the research was aligned with this institution's ethical policies and procedures, and was also granted Research Ethics Approval by this institution's Research Ethics Committee following a research ethics application for ethical approval. Core documents used included the Research Ethics and Integrity Code of Practice and Research Data Management Policy.

## **Findings**

### ***Overview***

The interviews identified significant barriers to WIL curriculum collaboration across three main categories:

- Operational and process barriers.

- Structural barriers hindering longer term WIL curriculum collaboration.
- New connective approaches needed to WIL curriculum collaboration for transforming learner outcomes.

### ***Operational and process barriers***

Research participants echoed literature review findings concerning insufficient operational resource and reward for curriculum collaboration. Academics saw insufficient workload hours as a key operational barrier impeding WIL curriculum collaboration. One participant commented:

We're encouraged to have industry relationships, but no workload model...they give you so much work you can't move forward and have industry relationships. (U8)

The need for dedicated collaborative relationship university resource was a key area for improvement. Sample quotes included:

'We should be involving employers, but we do everything on a shoestring. These initiatives need time...you're given too many roles. It's overloaded.' (U3)

Employers found universities inflexible in expecting WIL opportunities to fit academic calendar constraints, rather than resolving timing mismatches between universities and employers. One industry participant commented:

The challenge between academics and industry is that we work on different timescales. Academic output takes a long time to produce, industry wants answers yesterday. That mismatch causes trouble. (U15)

Employers felt universities should understand the pace at which industry works, before expecting employer commitment to WIL collaboration. Employers and universities admitted not always engaging in WIL curriculum collaboration sufficiently early on.

Sample quotes included:

Businesses aren't just sitting there waiting for you to call them, they have their own challenges. (U12)

When employers are involved early on, they understand learning outcomes, see how their contribution fits. (E4)

This is a big long-term commitment from employers, working with universities. (U1)

Longer term structural barriers to WIL curriculum collaboration included lack of database technology to capture curricular relationships, as discussed below.

### ***Structural barriers hindering longer term WIL curriculum collaboration***

Several participants discussed deep structural barriers hindering longer term WIL curriculum collaboration, including lack of perceived value in WIL curriculum partnerships and contact databases to support collaborative relationships. One participant commented:

Having to work with a university, we're not set up for that. That only gets done if somebody at our end puts a lot of energy behind it. (E7)

Lack of investment in WIL curriculum collaboration within universities can also inhibit curriculum collaboration outcomes, as discussed below.

### ***New connective approaches needed in WIL curriculum collaboration for transforming learner outcomes***

Several respondents felt that if operational and structural barriers could be tackled, this would facilitate more connective approaches to WIL curriculum collaboration. The importance of WIL curriculum connectedness was emphasised by academics and employers, including E6 and E2, to improve future graduate skills and talent pools.

Clarification of roles and expectations between employers and academics was also a challenge for participants, including U14 and U20, to improve wider commercial benefits. Further benefits of closer WIL curriculum collaboration included students developing professional identity and transferable soft skills to further their careers.

New approaches to collaborative delivery of curricular WIL assessment such as industry projects emerged as effective desired formats for deeper student WIL

experience. Closer WIL collaboration also improves business community relationships. Sample quotes included:

Live case studies, learners get immense real-world knowledge, when they go for an interview, they can talk about that. They value that engagement with business.' (U5)

The School is involved with the local business community. That's really improved engagement with business. The Vice Chancellor gets involved with the council's local projects. (U5)

Establishing earlier clarity about what partners want from WIL curriculum collaboration would also be a major improvement, including fresh approaches to feedback collaboration. Sample quotes included:

We should engage with employers to relate to learners. Did learners come with the right skills? Did they have areas of weakness? We should feed that back in a circular effect into programme development. (U5)

The notion that more planned WIL curriculum collaboration brings mutual benefits was voiced by respondents including U1 and E1. Benefits included improved graduate talent pools, and upskilling academics' subject knowledge. Another collaborative benefit was including employers on course advisory boards and validation panels for curriculum design. Sample quotes included:

We have an Employer Advisory Board...We consult and ask them what a curriculum should look like. (U14)

In summary, the findings identified that overcoming collaboration barriers and aspiring to more interconnected WIL curriculum collaboration can create transformative learner outcomes, adding value to university, employer and student workplace expectations, as discussed below.

## **Discussion and Conclusions**

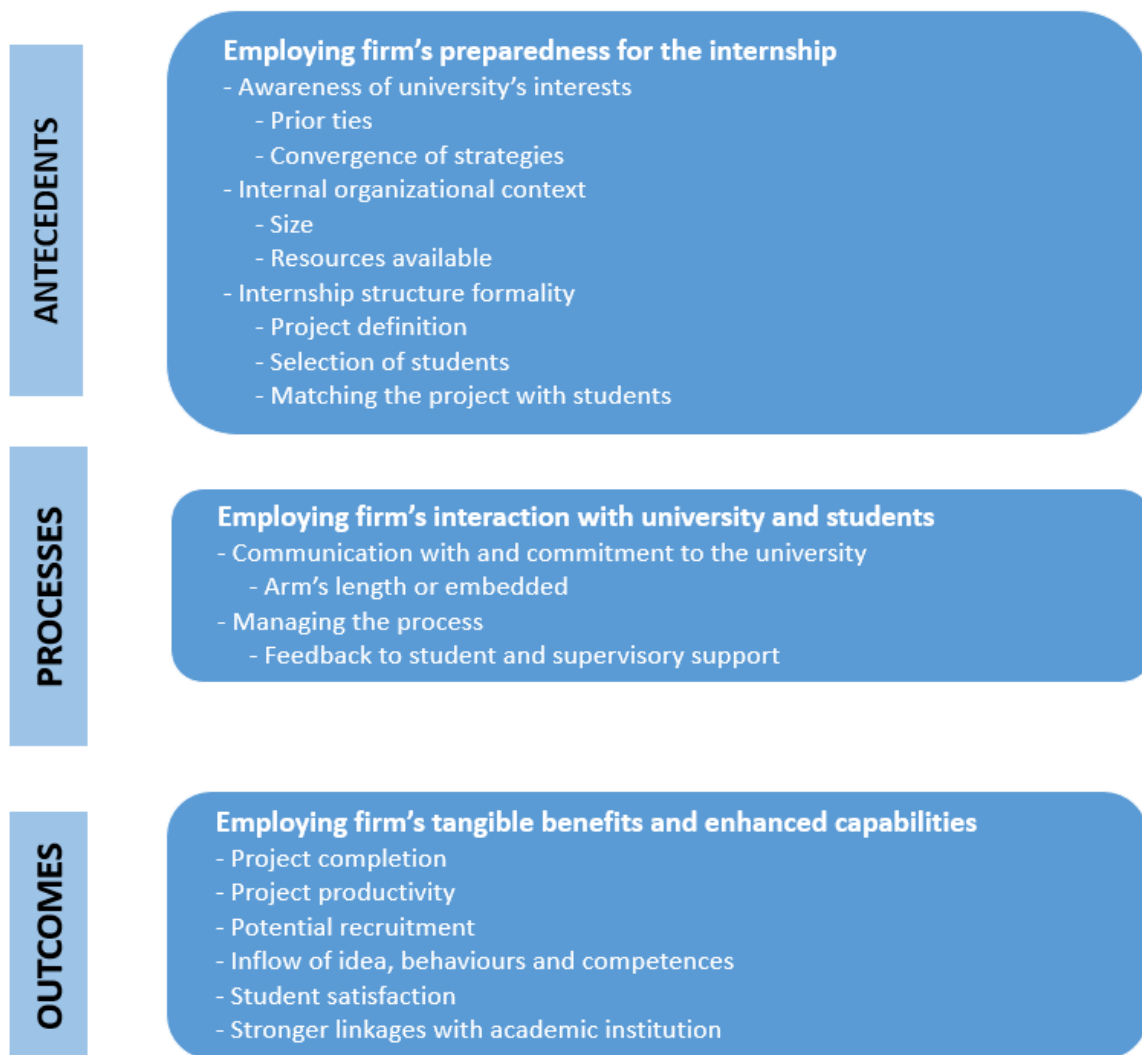
### ***Discussion***

The aim of this research study was to analyse WIL curriculum collaboration barriers between employers and universities, resulting in creation of a new framework for university-industry partnership success. This section will analyse the literature review and research findings relating to this aim.

The research findings uncovered key barriers impacting WIL curriculum collaboration between universities and employers, with opportunities for significant learner benefits if collaboration partnerships are implemented effectively.

The concept of WIL curriculum collaboration as a positive response to changing workplace dynamics enhancing student engagement, human capital, and transferable skills is evidenced by Kroon and Franco (2022), whose Model of Employer's Perspectives on Higher Education Internships offers credible actions in university-employer WIL collaborations through antecedent, process and outcome stages (Figure 1). This model has does not however include employers at antecedent stage, creating potential for WIL design weaknesses.

**Figure 1 - Model of Employer's Perspectives on Higher Education Internships**



(Kroon and Franco, 2022)

The increasingly interconnected roles of universities and employers in building future workforces therefore requires more collaborative WIL partnerships, as advocated by Fung's Connected Curriculum (2017). Moves towards greater WIL curriculum collaboration are driven by universities becoming more societally linked with industry for knowledge transfer and work-integrated skills development. WIL learners find value in industry interaction, and understanding how employers influence WIL curricula to improve work-integrated skills and industry knowledge (Nawaz, 2023).

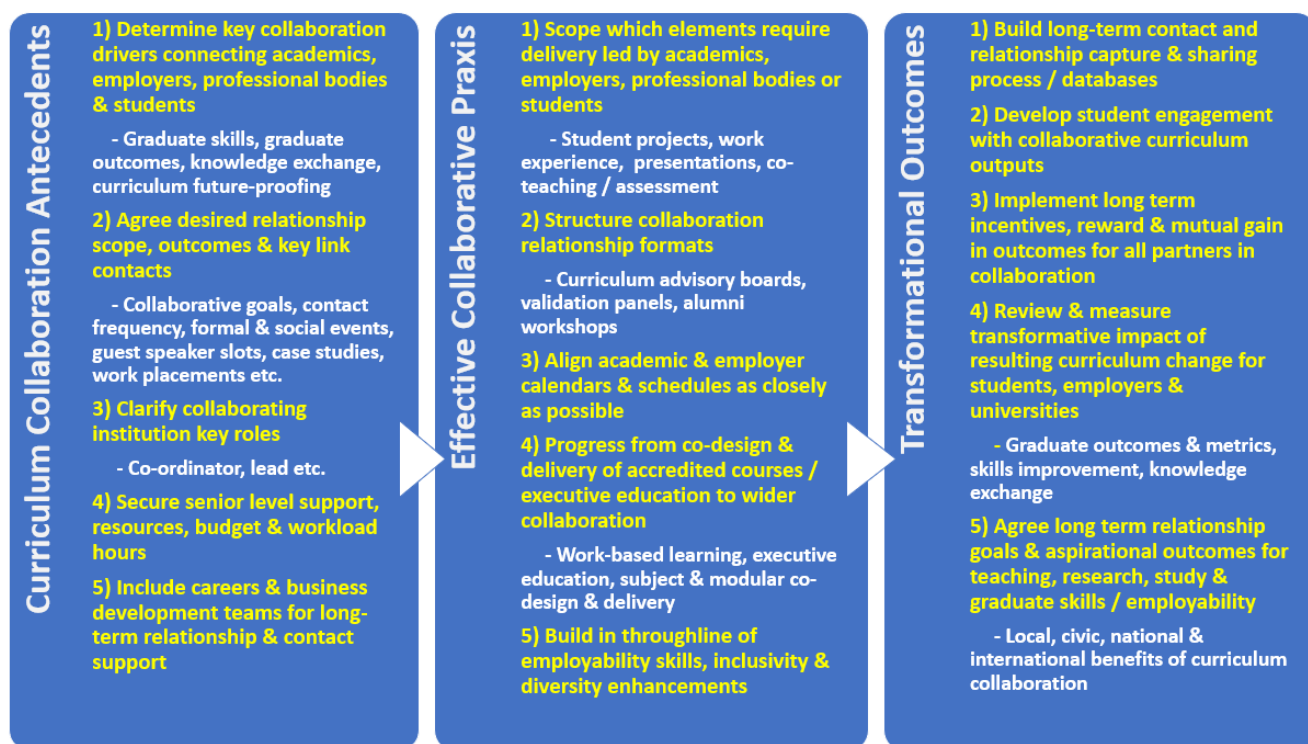
However, such positive trends face institutional barriers to university-industry WIL curriculum collaboration. Significant operational factors such as timetabling impede curriculum collaboration, and structural inhibitors block longer term curriculum collaboration, including lack of collaboration ownership, mutual perceived value, and relationship resourcing.

The structural barriers to WIL curriculum collaboration found in this research resonate with core principles of Collaborative Advantage Theory (Vangen and Huxham, 2013) discussed in the Literature Review. This conceptualises that institutions can achieve improved synergistic outcomes by combining partner expertise and knowledge, and collaborative effort to achieve key goals, but partners need to balance benefits with challenges of structural and cultural barriers such as inertia and conflict. The study findings clearly show that both employers and universities understand how collaborative advantage can improve learner workplace skills through synergistic WIL curriculum co-design, but inertia around operational issues such as timetable scheduling and contact sharing, as well as conflict over issues such as responsibility for curriculum relationship building, can act as significant barriers to effective WIL curriculum collaboration. Such barriers are grounded in a longstanding lack of understanding by universities and employers of the level of resource and commitment

required to participate in effective WIL curriculum design. Overcoming these barriers would therefore have actionable and academically meaningful implications for applied practice and research into university-industry WIL curriculum co-design collaboration effectiveness.

Fresh thinking and new forms of curriculum collaboration are therefore needed to minimize or eliminate the barriers in this study to effective university-industry WIL curriculum collaboration. The new collaboration relationship framework proposed in Figure 2 is therefore based on the study findings, with application of this framework to WIL curriculum collaboration facilitating minimization or elimination of the collaborative WIL barriers in this study, thereby transforming learner outcomes. Framework actions recommended include bringing employers into curriculum co-creation and delivery earlier, and integrating WIL deeper into curricula for student pre-professional identity formation. Implications are that truly interconnected partnerships in curriculum collaboration can create transformative WIL learner outcomes, as in Figure 2.

**Figure 2 – New Connective Curriculum Collaboration Framework**



(Advance HE, 2024)

This new framework overcomes collaborative barriers, and extends process improvements for WIL curriculum collaboration by Kroon and Franco (2022) shown at Figure 1, by involving employers more proactively at each stage, as in Table III.

**Table III – Connective WIL Curriculum Journey (Kroon and Franco, 2022 revisited)**

<b>Model of Employer’s Perspectives on Higher Education Internships (Kroon &amp; Franco, 2022)</b>	<b>New Connective Curriculum Collaboration Framework (Advance HE, 2024)</b>	<b>Interview Theme Links</b>
<p><b>Antecedents:</b></p> <ul style="list-style-type: none"> <li>• Employer prepares WIL internships</li> <li>• Defines university interest</li> <li>• Considers organisation context</li> <li>• Defines internship structure</li> </ul>	<p><b>Curriculum Collaboration Antecedents:</b></p> <ul style="list-style-type: none"> <li>• Determine key collaboration drivers with academics, employers, and students</li> <li>• Agree desired relationship scope, outcomes, contacts</li> <li>• Agree collaborative goals, contact frequency</li> <li>• Clarify key roles</li> <li>• Secure senior level support, resources, budget</li> <li>• Support from careers teams</li> </ul>	<ul style="list-style-type: none"> <li>• Operational and process barriers impeding WIL curriculum collaboration</li> <li>• Lack of collaborative resources and reward processes</li> </ul>
<p><b>Processes:</b></p> <ul style="list-style-type: none"> <li>• Employer, university and students deliver WIL</li> <li>• Student feedback provided</li> </ul>	<p><b>Effective Collaboration Praxis:</b></p> <ul style="list-style-type: none"> <li>• Scope delivery elements by academics, employers, students</li> <li>• Deliver student projects, work experience</li> <li>• Structure collaboration relationship formats</li> <li>• Align academic and employer schedules</li> <li>• Achieve wider WIL collaboration</li> <li>• Build employability skills</li> </ul>	<ul style="list-style-type: none"> <li>• Misalignment of collaborative roles and expectations</li> <li>• Discipline-specific institutional structure hindering interdisciplinary skills development</li> </ul>
<p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Employer reviews internship benefits</li> <li>• Considers future university links</li> </ul>	<p><b>Transformational Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Build long-term relationship database capture</li> <li>• Develop student engagement</li> <li>• Implement long term mutual gains</li> <li>• Measure curriculum change impact</li> <li>• Review graduate outcomes, skills improvement</li> <li>• Agree long-term relationship goals</li> </ul>	<ul style="list-style-type: none"> <li>• Structural barriers hindering longer term WIL curriculum collaboration</li> <li>• New connective approaches to WIL curriculum collaboration for transformational learner outcomes</li> </ul>

(Author’s own work, 2025)

The new connective framework in this study shows that for effective WIL curriculum collaboration, target outcomes and relationship duration should be planned at antecedent stage. This involves agreeing collaboration drivers, learner skills, mutual goals, outcomes, resources and contact frequency.

The framework recommends that once collaboration occurs, WIL collaborative delivery scoping is led by academics alongside employers. Collaborative partnership structures should be agreed, including curriculum advisory boards. Alignment of academic and employer schedules should be discussed early to avoid timing mismatches. At this stage, longer term WIL curriculum co-design can be considered, building throughlines of employability skills into WIL curricular partnerships.

Finally at outcome stage partners should review measurable outcomes, student engagement, improved work-integrative skills, and graduate talent pools. Measuring positive impacts for communication to management for future support is key. At outcome stage, aspirations for longer term WIL collaborative curriculum relationships, learner outcomes, and wider local and civic benefits should be considered.

The three stages recommended in the Connective Curriculum Collaboration Framework therefore have significant potential to overcome WIL collaboration barriers for partnership success.

## ***Conclusions***

This research study aimed to analyse WIL curriculum collaboration barriers between employers and universities, through considering the phenomenological experiences of academics and employers in WIL curriculum collaboration. The study shows that WIL curriculum collaboration between employers and universities is highly topical, driven by growing employability focus in economic policy. The study contributes to employability literature by capturing positive drivers for co-designing effective

curriculum collaboration for enhanced learner employability skills. The study also shows increasing industry willingness to work with universities on graduate skills through WIL curriculum design.

However, the study also evidences significant structural and operational barriers to WIL curricular collaboration, including inadequate resourcing. Both institutional and cultural collaboration barriers are significant, including lack of perceived mutual value, unclear ownership of collaborative initiatives, and insufficient curriculum collaboration incentives.

The proposed Connective Curriculum Collaboration framework at Figure 2 therefore emphasises the importance of planned collaborative connectedness, offering a fresh approach to WIL curriculum collaboration. The framework can contribute significantly to future WIL curriculum design, by improving graduate skills and deepening knowledge transfer between universities and employers. The study's new connective collaborative framework therefore presents a fresh contribution to WIL curriculum collaboration conceptualisation, with the potential to transform graduate workplace outcomes.

The study demonstrates originality in gauging phenomenological experiences of both employers and universities concerning WIL curriculum collaboration barriers. The findings provide value in presenting a framework for more planned, connective partnership-based WIL curriculum collaboration.

Limitations of this research include translation into professional practice. Translating interpretivist qualitative research with limited sample sizes into professional practice may require further quantitative research to validate practical applicability of the research findings and new framework.

Recommendations for future research therefore include deeper longitudinal phenomenological research in WIL environments amongst institutions trialling the collaborative framework proposed in Figure 2, and gauging results in improved WIL curricula and graduate outcomes.

In terms of implications for theory to bridge gaps with practice, the study findings offer a new connective framework offering opportunities to minimize or eliminate structural and cultural collaboration barriers such as inertia as discussed in Vangen and Huxham's Collaborative Advantage Theory (2013). The study findings also extend Kroon and Franco's Employer's Perspective Model (2022) as a theoretical approach towards more connected, planned practice in curriculum co-design through the connective framework stages proposed in this paper.

Implications of the research for universities are also significant, offering valid reasons why barriers exist in university-industry WIL curriculum collaboration, alongside a new actionable framework to facilitate universities' ability to overcome barriers to effective employer collaboration for improved WIL curriculum currency and graduate outcomes.

In terms of implications for employers, application of the proposed connective collaboration framework to overcome barriers mirrored in Collaborative Advantage Theory (Vangen and Huxham, 2013) can improve WIL curriculum currency and facilitate access to more skilled graduate talent pools.

Implications of the study for students are considerable in diagnosing barriers to university-industry WIL collaboration such as relationship inertia impacting learner skills deficits. Furthermore, the study's new framework proposes actionable steps for universities to overcome these barriers through actions including enhanced university-industry collaboration on WIL curricula, enabling students to experience authentic WIL initiatives such as industry projects, build pre-professional identity and work-

integrative narratives, and acquire greater social capital through industry interaction for effective future workplace skills.

The implications of the study for policy development are also meaningful, as the findings and new connective framework can be applied to measurable WIL curriculum collaboration to support initiatives such as the UK national skills agenda (Skills England, 2025), through employers and universities working together to improve graduate workforce skills and readiness.

In summary, this research study should contribute positively to ongoing policy development around WIL curriculum development and university-industry partnerships, thereby improving graduate career readiness for the workplace of the future.

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