

**Beyond Degree Apprenticeships:
conceptualising integrated professional development**

Conceptual paper for UVAC

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Summary

The introduction and rapid growth of combined apprenticeship and degree programmes in the United Kingdom and elsewhere has brought to the fore a particular type of higher education where academic learning and professional training run together. An unsophisticated approach to this type of provision treats it as a parallel or dual route, with off- and on-job learning taking place in tandem through day-release, block-release or a digitally-facilitated equivalent, but with minimal co-ordination or integration. A more effective model can be conceptualised as an integrated professional development pathway, where learning in the work-space and educational space, along with theory and practice, are blended together often with the aid of digital technology.

From the perspective of higher education, integrated professional development draws on principles from work-based learning and work-integrated learning, but has a focus that is distinct from either. Its defining characteristics include:

- The situation of the learner principally in the work-space rather than in the institution.
- The presence of a curriculum relating to a professional or occupational field, which extends into the work-space and is organised, modified and renegotiated in context.
- An emphasis on integrating theory and practice, keeping close to the 'work-face' while being intellectually robust.
- In addition to an academic qualification, an end-goal of professional recognition in whatever form is appropriate for the field concerned.

Integrated programmes can be challenging to implement both for universities and work organisations. The main prerequisites are:

- A work environment that supports learning that goes beyond immediate job requirements, is open to curiosity and questioning, and enables the learner to become part of a community of practice.
- Careful attention to learning design, pedagogy and assessment in order to support integration, both at an overall level and as they apply in the work-space.
- Learners who quickly become adept at learning from practice.
- Effective partnerships at strategic and operational levels between educational institutions and work organisations.

Realising effective integrated development has implications for all the organisations involved. Work organisations need to adopt a culture of learning and enquiry rather than deference to hierarchy and expertise, and universities need to value engaging with, learning from and contributing to the work-space as much as the traditional roles of researching and disseminating knowledge. Professional, regulatory and other standard-setting bodies (including those responsible for programme content and quality assurance at a general level) may not be involved at the point of delivery, but their policies, specifications and validation procedures need to be aligned with integrated development and support innovative modes of provision.

Introduction

Degree Apprenticeships¹ were introduced in the United Kingdom in 2015 as programmes that involve workplace training and experience while also leading to a university degree at undergraduate or postgraduate level (BIS 2015). With government backing they have been adopted by a majority of universities, used by a broad cross-section of employers and supported by professional registration and qualifying bodies including those in engineering, medicine, architecture and law. They have been described as having a positive effect on the relationship between higher education and business (Crawford-Lee and Moorwood 2019), there is evidence that they are contributing to economic development and social mobility (Lillis and Bravenboer 2022, Nawaz *et al* 2023), and they are supporting professionalisation in occupations as diverse as sales, policing and digital industries (Lester and Bravenboer 2020). Nevertheless there have been ongoing problems with their introduction and these have led to a tendency in the literature to focus on practical and policy issues along with the detail of implementation. British Degree Apprenticeships have been defined quite narrowly as a specific type of programme, with rules about how and by whom they can be developed; how they are funded and contracted for; and how they are delivered, with detailed regulations covering on- and off-job learning, content, assessment requirements and quality assurance, most of which are shared with apprenticeships more generally². During the first decade of these programmes there has been a focus on getting the basics right, fitting them into the culture of higher education, addressing problems such as high attrition and low achievement rates, and not least overcoming issues and making use of opportunities occasioned by the coronavirus pandemic.

A broader conceptualisation of the type of provision of which Degree Apprenticeships are an example is overdue for two reasons. One is to move the discussion on from things specific to British apprenticeships, opening it up in a way that embraces comparable programmes including internationally. Apprenticeship-type programmes that incorporate a higher education qualification are becoming established in Ireland and beginning to appear in Australia, while arrangements for similar programmes have been established by individual companies and consortia such as Accenture and the Chicago Apprentice Network in the United States. This also extends to programmes in the UK that do not conform to apprenticeship rules but have been set up for instance by professional or industry bodies or through negotiation between institutions and employers. The second is to aid a focus on what makes for high-quality professional pathways without being overly constrained by preconceptions about apprenticeships or about vocational degrees whether they are historic in origin or based on particular state, sectoral or institutional practices. Many countries' higher vocational education provision includes mixes of institutional and workplace learning, but there is increasing recognition that these two strands need to be better-integrated (e.g. Mordhorst and Gösling 2020). Among other things this involves moving away from a simple dichotomy between what happens in the workplace and what happens in the institution, or what are referred to in British apprenticeship parlance as on- and off-the-job learning. The conception that will be explored here is *integrated professional development*, where the theory and practice of a profession or occupation are learned in a way that is intimately connected, combining professional recognition in whatever form is appropriate with the award of an academic qualification.

¹ Degree Apprenticeship is the term used in England and Wales: similar programmes are referred to as Professional or Graduate Apprenticeships in Scotland and Higher Level Apprenticeships in Northern Ireland.

² Current details for England are on the Institute for Apprenticeships and Technical Education web site, <https://www.instituteforapprenticeships.org>

Professional development pathways

Routes into professions can be classified into five broad types, drawing on Houle (1980), Bines (1992) and Lester (2008, 2009): *apprenticeship*, *parallel*, *sequential*, *integrated* and *experiential*. The pure or traditional apprenticeship route involves a novice learning alongside an experienced practitioner, with training provided in the course of work and sometimes supplemented by personal study. In the past governance and validation of apprenticeships was normally provided by an association or guild, typically involving sign-off by the employer plus a more formal examination or set-piece assessment. Following completion of the apprenticeship it was usual in some fields for the newly-qualified practitioner to continue as a 'journeyman', broadening his or her experience, before being accepted as having achieved a fully-qualified level. In occupations claiming the status of professions, as well as later in craft, trade and clerical occupations, this type of route largely evolved into the parallel model where an academic strand ran in tandem with work-based training: often first evening classes to help prepare for the final examination, and later a day-release or sometimes block-release course within paid time. While many professions moved away from parallel routes in the latter half of the twentieth century, they have remained widely-used for craft and trade occupations through to the present; both the 'dual' system used in Germany, Austria and Switzerland and modern British apprenticeships are specified in terms of the parallel route (see for instance Field 2018).

In formalised and aspiring professions that did not already have an academic entry-route an increased emphasis on the theoretical basis of the profession and the desire to claim academic status led in mainly the twentieth century to the setting up of professional training schools and closer links with universities (Millerson 1964, Schön 1983). This in turn precipitated the dominance of the sequential model in which the would-be practitioner first takes a full-time degree or diploma before entering work and completing professional training. A form of this model is also reflected in the graduate training schemes used by many organisations, where in the absence of a professional qualifying body the employer effectively determines the level of achievement required. By the end of the twentieth century a number of variations of the sequential model were in use, partly depending on whether the first degree provided specific preparation for the profession concerned or was treated as an entry-requirement. The simplest version consists of the basic two stages of full-time course followed by work-based training, while another common pattern has three stages such as a degree, a full-time professional or postgraduate course, and a parallel stage of work-based training accompanied by an off-job course; in addition a final period of experience can be required before completing the professional body's assessment for accreditation or licensing (Lester 2008). A problem with the sequential pattern is that while it provides a good theoretical grounding before entering the workplace, it is not necessarily effective in creating links between theory and practice and typically leaves novice practitioners with substantial learning and re-learning to do on entering the working environment (Eraut *et al* 2005, Van Hamel and Jenner 2015).

A practical response to the limitations of the sequential model has been the emergence in some fields of what can be termed an integrated development route (Lester 2009), drawing on 'post-technocratic' principles (Bines 1992). To an extent the integrated model returns to the idea of learning theory and practice in parallel, but with two important differences. One is that it avoids the typical parallel structure that separates on- and off-job learning, providing flexibility for instance to give time to a more intense focus on theory when needed or to take advantage of various modes of digitally-mediated learning. The other, more importantly, is that it brings theory and practice together both

through co-ordinating the timing of activities and by using approaches to learning and working that are conducive to cycles of putting theory into practice and generating theory from practice; it avoids a common problem of the parallel model where content taught off-job is rarely linked in real time to what is going on in the workplace. Integrated programmes also usually give academic recognition for relevant workplace learning, valuing learning that meets the programme's objectives regardless of where it takes place or by whom it is directed.

In the United Kingdom the most prominent integrated programmes prior to degree-bearing apprenticeships have been in the education, health and social care sectors. In education the integration of professional training within teaching degrees and postgraduate certificates is long-established, while for nursing the trend has been from a primarily practical form of training governed by the teaching hospital to an academic programme (now a degree in the UK) with placements in hospitals and other care settings. In social work the development of a pioneering model, admittedly for practitioners who had already gained initially qualified status, is described by Winter and Maisch (1996). One aim of capturing the practice element as a placement or series of placements within the course is to enable the entire programme to be structured as a single entity. However, there is evidence that while a combined structure is a necessary condition for the efficient integration of learning, on its own it is insufficient: other factors such as the pressures of the work environment and the approaches to teaching, learning and assessment that are used can result in a fragmented experience for the learner (e.g. Gallagher 2004, O'Driscoll *et al* 2010). In many cases nominally integrated programmes use a parallel or sequential mode of delivery within an integrated wrapper. The level of proficiency attained at the end of the programme may also be less than that expected for qualifying in chartered and similar professions, requiring a probationary period or the equivalent before being accepted as a fully-fledged practitioner (Willis Commission 2012, Lester *et al* 2016). This does not mean that a 'full-time with placements' programme cannot integrate learning effectively, but it does illustrate the need for careful attention to the way that learning is designed and managed within the programme structure (Berndtsson *et al* 2020) and how the transition to full-time, fully-qualified practitioner is supported (cf. Eraut *et al* 2005).

Experiential routes enable practitioners to build up knowledge and experience by whatever means is appropriate for them and then go through an assessment and accreditation process of some form to gain professional status. This can be managed purely by the professional body, or it can include recognition of prior learning by an academic institution. These routes are most widely used by experienced practitioners who may or may not be graduates and who have learned on the job or entered from parallel or linked occupations, or through promotion within an organisation. In most professions these routes account for only a small fraction of entrants, though they are more widely used in fields that have avoided prescribing specific entry-routes or where practitioners generally qualify in an allied profession first (Lester 2009, 2016).

The integrated model in theory

From an educational standpoint, twentieth-century professional development routes can be seen to have evolved from a craft perspective concerned principally with accumulating a body of practice and practical knowledge (Sennett 2008) towards an intellectually-oriented one that emphasises grounding in the principles and theory on which practice is based. The assumption behind the latter position has been that it is necessary first to learn the 'science' or fundamental principles underpinning the

profession, then the 'applied science' or theory of how to carry out the profession's tasks, and finally to apply this knowledge in practice (Veblen 1918). This perspective fits neatly with the sequential development route, where the three stages might be represented as a university degree, a professional course and a period of supervised practice. Schön's critique of this mode of education as producing practitioners who are poorly equipped to deal with the 'swampy lowland' or messy problems of real-life practice (Schön 1983, 1987) is well-known, as is his counter-proposal that places action and reflection at the core. Various alternatives to what Schön has termed the 'technical-rational' approach emerged in the late twentieth century, ranging from programmes drawing on his reflective practitioner philosophy through to the 'competence-based' education and training movement that in its most extreme form denied the role of theory and envisaged professional practitioners as requiring no more than training to meet predefined standards of competence.

A problem with a purely competence-oriented or reflective approach to development that has been pointed out by Young and Muller (2014) among others is that the development of reflective practice or even basic professional skills requires relevant knowledge from which to reflect and act. There is a difference for instance between reflecting on an architectural project as a (trainee) architect, with access to architectural knowledge and theory, and as a layperson. This is not an argument for sequential development at a structural level, but it does suggest that tilting the balance too far to a practice-first orientation is both inefficient and can result in practitioners who struggle conceptually to move beyond the context of their immediate practice. If as espoused by most professions the aim is to produce capable, adaptable practitioners rather than people trained to do a specific job, an ability to draw on general principles, assess situations critically and integrate contextual and more general knowledge is needed. Typically, professions have at least a partly 'vertical' knowledge-structure (Bernstein 1999) where knowledge can be seen as building incrementally from underlying principles through broad practice theories to the more specific and contextualised knowledge drawn on directly in practice; expecting practitioners to acquire all of the theory they will need by reference to specific practice episodes is insufficient. On the other hand it is also insufficient to assume that knowledge acquired at a distance from practice, even if directly relevant, can simply be transferred into practice settings; significant re-learning and recontextualisation are needed (Marton 2006, Winberg 2007, Eraut 2010). Even in medicine, characterised in part by a strongly vertical knowledge-structure, the advantages of early integration between theory and practice are widely recognised (Dornan 2005, Lackman and Pawlina 2006, Bleakley and Brennan 2011).

In its ideal form the integrated model nevertheless has at its core an approach to development that is pragmatic in the tradition of Dewey (1938), draws on Schön's principles of reflection and action, and borrows from fields such as action learning (Revans 1980) and action research (Lewin 1946). It also has a focus on professional competence or proficiency, though a version of competence that is expansive and resilient over time rather than oriented towards meeting narrow occupational standards or acquiring collections of competencies and attributes (Epstein and Hundert 2002, Lester 2017). Where it differs from similar conceptions that are geared towards experienced practitioners – for instance the negotiated and self-structured version of work-based learning discussed in the next section – is in interweaving the profession's 'science' and 'applied science' in a way that both ensures that practitioners have an adequate theoretical base for their work, and keeps sight of how practice recontextualises, modifies and ultimately generates theory.

To conclude, Scott and colleagues' discussion of 'colonisation' and 'reverse colonisation' in the context of professional doctorates (Scott *et al* 2004) is relevant here. Colonisation refers to academic norms and values being superimposed on professional programmes in a way that ignores or downplays practice-based issues, concerns and ways of thinking and working. Reverse colonisation involves the academic institution taking on the values and criteria of the workplace, potentially to the detriment of intellectual rigour and robustness. It is critical to avoid both. Integrated professional development is both practical and intellectual, and can be neither an academic programme in a professional field, nor simply training to do a job.

Work-based learning or work-integrated learning?

In higher education, principles and practices relevant to integrated professional development can be found in what have become known as work-based learning and work-integrated learning. These two terms refer to overlapping approaches that are variously claimed to be closely related and pedagogically similar, or distinct and pedagogically incompatible (Costley 2021, Fergusson and van der Laan 2021, Gerhardt and Annon 2023).

Work-based learning (WBL) is a broad term that encompasses "all and any learning that is situated in the workplace or arises directly out of workplace concerns" (Lester and Costley 2010, p. 562); it has been used to describe learning through day-to-day practice, investigation prompted by practice issues, bespoke courses for organisations, placement learning, projects, modules and whole programmes negotiated around work activities, and (particularly outside of higher education) vocational programmes such as apprenticeships and traineeships. However, a model of WBL (negotiated WBL or NWBL) evolved in UK and later Australian universities in the early 1990s, involving programmes negotiated by individuals and small groups around their work contexts, needs and aspirations. NWBL includes a substantial proportion of learning that is undertaken in the work 'space' (in the sense used by Lefevbre [1991]) and draws directly on work activity (Boud and Solomon 2001, Stephenson and Saxton 2005, Lester and Costley 2010). Conceptually, this type of WBL is located in ideas of democratic pragmatism (Dewey 1938), adult learners as active agents and creators of meaning (Knowles 1970, Kolb 1984, Hase and Kenyon 2000), and in the reflective practice, action research and action learning traditions. It is also essentially transdisciplinary in that the starting-point is the individual context of practice rather than a defined academic or professional field (Gibbs and Costley 2006, Garnett 2016). At a practical level its salient features include the use of reflection and enquiry to draw out theory from practice; academic recognition for both past and forward-planned learning from the workplace; the use of learning agreements to create programmes and modules that are coherent and appropriate as well as uniquely individual; and the role of the academic as a facilitator, methodological guide and expert resource rather than primarily as a teacher of substantive knowledge (Lester and Costley 2010). There is no pre-planned curriculum or agenda of reaching predefined competence requirements in this model, other than that implied by generic academic standards or level criteria; the 'curriculum' emerges from the individual's work-oriented agenda. In effect this is a continuing rather than an initial development model as it requires substantial experience of work on which to draw; this is still the case when it is used as part of a professional entry pathway, for instance in enabling teaching assistants to gain a degree in order to progress to a postgraduate teaching programme, or providing a structure to support experienced practitioner accreditation.

Work-integrated learning (WIL) has been defined as “approaches and strategies that integrate theory with the practice of work within a purposefully defined curriculum” (Patrick *et al* 2008, p. iv). The significant difference from the NWBL model described above is the presence of the predefined curriculum, though a scan of the literature on WIL will indicate that the term is most widely used in the context of full-time programmes where work placements or attachments are part of the course, often geared to developing employability at a general level rather than proficiency as a practitioner (Oliver 2015, Fergusson and van der Laan 2020). Nevertheless WIL is also discussed in relation to integrated professional programmes, particularly in the health sector (e.g. Berndtsson *et al* 2020), teaching (De Beer *et al* 2020) and to a lesser extent apprenticeship-type programmes where learners can be regarded as located primarily in work rather than in an academic institution (Bravenboer 2016, Konstantinou and Miller 2020, and Ashman *et al* 2021 in Australia). The conceptual basis of WIL overlaps with that of (N)WBL, for instance in drawing on *inter alia* the work of Dewey, Kolb and Schön, while differing – at least in professional contexts – in being primarily field-based rather than transdisciplinary. Its features include the integration of theory and practice within an intentional curriculum; the use of authentic learning contexts, involving work-focussed tasks that have meaning both for the learner and for a work organisation or client community; and the involvement of an external partner, generally from the relevant organisation or community (Zegwaard *et al* 2023).

Integrated professional programmes incorporate aspects of both WBL and WIL, with differences depending on the type of programme and the stage of development of learners. Kettle (2013) for instance distinguishes between the needs of learners on full-time-plus-placement programmes, including nursing and other integrated degrees, and those in work, including on apprenticeship-type programmes. The former might be expected to reflect primarily WIL principles, while the latter also brings in aspects of WBL, particularly in responding to the context of the work environment and individual needs and opportunities within it; the ‘purposefully defined curriculum’ of WIL becomes renegotiated at a practical level by the nature of the work-space in which it is enacted. Learners on apprenticeship-type programmes also vary from being neophytes with neither relevant training nor experience, to those who already have significant exposure to work relevant to the area concerned. Brown *et al* (2007) distinguish ‘affirmative’ programmes, driven by a common curriculum and that might be expected to follow mainly WIL principles, from ‘transformative’ ones that are geared to more experienced practitioners, located in a specific context and community of practice, and tend towards ‘post-formal development’ (Czikszentmihalyi and Rathunde 1990); these are more likely to reflect (N)WBL principles. In practice where provision sits on this spectrum can not only be influenced by what it is aiming to do (for instance to take school-leavers through to qualifying as accountants, to provide a pathway for healthcare assistants to become nurses or physiotherapists, or to provide a route to chartered status for early- to mid-career managers), but it can also change as the programme progresses and learners increase their levels of knowledge, competence and self-efficacy.

Integrated professional development therefore sits in a slightly different paradigm from that represented by either WIL or (N)WBL. That does not mean that a different set of principles and practices are needed, and all of the practice principles outlined in the next section have already been discussed in relation to WBL, WIL or apprenticeships. However, integrated professional development has a different starting-point and focus from either placement-based WIL, which assumes an institutionally-dominated space, a predefined curriculum, and is more often than not concerned with gaining work experience rather than qualifying as a practitioner, or from NWBL, in which the work-space dominates and both the ‘curriculum’ and the ultimate goal of the programme reflect the context,

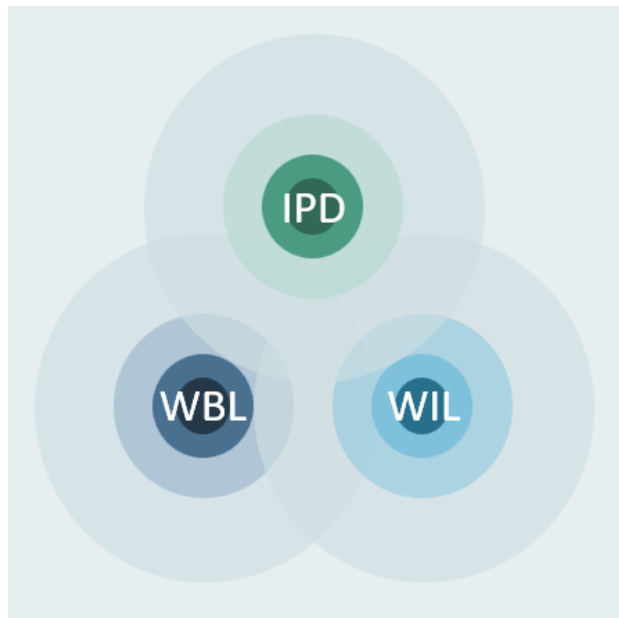


Figure 1. Diagrammatic relationship between integrated professional development, work-based learning and work-integrated learning.

aspirations and objectives of the individual learner or work group. This could best be represented not so much as a discrete field as by a different (if proximal) starting-point which blends outwards into a common space (figure 1).

Realising integrated development

The evidence from nominally integrated programmes, whether for instance health profession degrees (e.g. O’Driscoll 2010, Willis Commission 2012), Degree Apprenticeships (Lester and Bravenboer 2020) or other routes that link higher education courses and professional training (e.g. Westerhuis *et al* 2014, Mordhorst and Gössling 2020), indicates that achieving integration of learning at more than a superficial level requires careful attention to programme design, pedagogy, and not least the relationship between the educational and work spaces. Four aspects are discussed here: the workplace or work-space; programme design and pedagogy; the learner; and organisation and partnership.

The work-space

The characteristics of the workplace or work-space within which the learner is based, and the richness of the learning opportunities available within it, are critical to the effectiveness of integrated learning (Billett and Choy 2014). Drawing on Engeström (2001), Fuller and Unwin (2008) discuss workplaces as ‘restrictive’ or ‘expansive’ in relation to learning. Their analysis relates to the more traditional kinds of apprenticeships, but the basic principles can be applied equally to professional learning. Restrictive work environments typically support the development of basic competence within a narrowly-defined role (*ibid*, Ching and Henderson 2016); are strongly task-focussed, emphasising the ‘worker’ role rather than the ‘learner’ and leaving little time for consolidation, reflection or questioning (O’Driscoll *et al* 2010, Baker 2019); and at least tacitly discourage questioning of managerial decisions, accepted practices or organisational norms (Gustavs and Clegg 2005, Siebert and Costley 2013). By contrast

expansive workplaces support more rounded development, aid learning beyond immediate job requirements, and enable learners to engage with and become part of communities of practice (Fuller and Unwin 2008). They typically have a culture of learning within the organisation or at least the relevant workplace; awareness of and willingness to overcome barriers to learning; a rationale for supporting learners that is championed by senior managers; connections between the objectives of learning and those of the business or organisation; and encourage curiosity and are open to norms and assumptions being questioned (Lester *et al* 2016, Lillis 2018, Lester 2020).

Billett and colleagues (Billett and Choy 2014, Billett and Smith 2014) comment on the need for the workplace to have its own pedagogy or set of approaches, tools and methods to facilitate learning. This includes presenting and structuring work resources and tasks so that they support learning and development through work practices (cf. Lave and Wenger 1990), as well a social dimension that enables learners to engage with co-workers to observe, listen, share, practise, discuss and question (*ibid.*, Billett and Choy 2014, Nottingham and Mao 2023); earlier research in the context of continuing development indicates the importance to this of positive relationships with colleagues and built-in opportunities to meet and discuss (Gear *et al* 1994). This social aspect is no less important in environments where outputs are principally intellectual and workers may interact mainly through digital interfaces. Further, for professional-level programmes the work-space needs to incorporate tasks that are challenging, encourage critical reflection, and require the integration of theory and practice (Bravenboer 2019), building to exposure to the kind of ‘wicked problems’ (Rittel and Webber 1973) that might be expected to challenge a qualified practitioner. Finally, most professional workplaces will make at least some use of digital resources, interfaces and devices. To maximise the learning potential offered by these it is important that they are integrated both into the practice of work, so that they can enable learning in the flow of everyday activities and support tasks at the point of need (Martin and Ertzberger 2013, Berking and Haag 2015), and into the overall workplace pedagogy (Lester and Crawford-Lee 2023).

A further aspect that is important in work-based professional development is access to a mentor at work (Major *et al* 2011, Dalrymple *et al* 2014). The role of the mentor differs from that of a coach or trainer, and in the context of work-based, work-integrated and apprenticeship programmes can include providing insights into how the workplace operates, including in terms of politics and relationships; acting as a sounding-board; helping the learner to become more independent; mediating between the learner, their manager and other colleagues; signposting and ensuring access to learning opportunities and resources in the workplace; helping the learner to balance learning with work tasks and personal commitments; helping the learner to reflect on practice and integrate it with theory; and acting as a bridge between the workplace and the university (Dunne *et al* 2008, Evans *et al* 2010, Roberts *et al* 2019, QAA 2022).

Design and pedagogy

Work-based and work-integrated learning have been described as having their own ‘signature pedagogies’ or distinctive approaches to programme design, teaching and learning (Dalrymple *et al* 2014, Lester *et al* 2016). The latter comment that these “reflect the idea of the learner as an active agent and creator of meaning; the workplace as a legitimate site of learning and knowledge generation, rather than application only; and that learning objectives, processes and products are to a greater or lesser degree the subject of negotiation between learner, employer and institution” (p.20).

Similar principles can be applied to integrated professional development, and may be summarised as follows:

- Learning design that sets out to integrate practice and theory, and learning in the work-space with that which takes place outside of it; recognises how the programme sits in, influences and is influenced by the work context; and provides flexibility to accommodate the needs and starting-points of individual learners, employers and workplaces or work contexts.
- Methods of teaching, facilitation and learning that are flexible and adaptable; closely linked to work activity; and that ensure the necessary ground is covered while developing independent learning and self-efficacy, practical academic skills and professional judgement.
- Methods of assessment that are valid and accessible; authentic in terms of the work context; and are sufficiently robust to provide confidence in the practitioner's ability to act effectively and appropriately.

In practice this is likely to include a repertoire of approaches that are largely familiar from existing WBL and WIL contexts, or are beginning to be employed as greater use is made of relevant digital technology. At programme level this includes recognition of previous relevant learning regardless of source; the use of tripartite learning agreements which, while they may not define the programme's content in the same way as agreements in NWBL, nevertheless shape how it will be organised, adapted and modified in negotiation with the learner and the employer; and a resulting individual agenda that aligns activities and goals related to both work and learning (Garnett 2020). Teaching and learning approaches feature things such as content provided in the form of resources that can be related to, and where relevant used in, the workplace (Lester and Crawford-Lee 2023); the use of 'flipped' or 'inverted' approaches, where live sessions are used to discuss and reinforce content rather than introduce it (Elrayies 2017); reflection before, during and after work activities, sometimes captured through learning logs and other forms of recording (Rowe *et al* 2020); practice-based projects and investigations, and the use of portfolios or records of work artefacts accompanied by explanatory accounts or discussions (Lester and Costley 2010); discussion groups and learning communities, including linking learners across different workplaces (Nottingham and Mao 2023); and one-to-one support to help learners develop their abilities to learn and exercise judgement effectively both in an academic sense and in the workplace (Minton and Lowe 2019). The presence of a tutor or academic mentor, who acts as a process consultant and forms a link between institution or training provider and employer, is important as a parallel role to the workplace mentor, as is the use of three-way discussions that go beyond being progress reviews and become learning conversations and a means of reviewing and modifying the learning agreement.

Depending on how they are designed assessment processes and methods can have a powerful influence on learning (Yorke and Knight 2006), and therefore support or undermine integration (Boud *et al* 2023). Basic principles for integrated professional development are that assessment methods need to reflect the real-life demands that will be placed on learners in terms of situational understanding, professional practices, dealing with complexity and making ethical judgements, and avoid creating barriers that do not relate to the legitimate objectives of the assessment (Yorke 2011, Ajjawi *et al* 2020). While individual assessment activities can focus on different aspects of the programme, it is logical to adopt a single assessment regime that combines the requirements of both

academic and professional interests (Bravenboer and Lester 2016, Lillis and Bravenboer 2020). Particularly towards the culmination of the programme this would be expected to focus on the larger sequences of action and the accompanying professional judgements needed in complex practice situations (after Eraut 2004), and in a way that is sufficiently realistic and robust to provide confidence in the practitioner's ability to act proficiently, thoughtfully and ethically across situations likely to be encountered in practice (cf. Winch 2023).

Finally, appropriate use of digital technology provides opportunities to go beyond what has previously been possible in terms of integrating learning. This includes improving access to learning resources in the work-space, which can extend beyond task-oriented learning to engaging with deeper knowledge and with interrelating theory and practice. Digital resources of various types can support among other things learning through online communities, just-in-time learning at the point of need, simulated practice and the use of 'serious games' (Susi *et al* 2007), experimentation and exploration; these capacities are set to increase as digital tools become more sophisticated (Littlejohn and Pammer-Schindler 2022). In turn this is likely to support the use of face-to-face or synchronous time for consolidation and deepening of understanding rather than content delivery. There is also scope to use 'digital first' blended approaches to overcome issues of distance and timing, though the way that this is done needs to follow a consistent pedagogy and avoid simply attempting to replicate face-to-face and document-based methods online (Lester and Crawford-Lee 2023).

The learner

Both WBL and WIL view learners as active agents and part of a three-way endeavour comprising learner, employer and institution or provider. The approach taken by the individual learner is at least as critical to this endeavour as the affordances of the workplace or the quality of programme design and pedagogy (e.g. Berg and Chyung 2008), although outside of anthropological or ethnographic studies of workplace learning it is given little attention. Billett and colleagues comment that learners need to have skills and dispositions that enable them to become intentionally active learners, identify and use learning opportunities at work, and actively integrate learning experiences. This in turn is affected by learners' personal epistemologies of practice, which influence how they understand and engage with the workplace and its pedagogies and with colleagues in terms of identifying, creating and making best use of learning opportunities (Billett 2009, Billett and Choy 2014, Billett and Smith 2014). Stephenson (2001) adds to this self-efficacy, i.e. realisable belief in one's ability to perform the relevant work or learning task successfully (after Bandura 1977).

While there is widespread recognition that WBL and WIL approaches can develop these abilities and that they are to an extent self-reinforcing (e.g. Stephenson 2001, Reddan 2016), attention is also needed to developing them early on in integrated professional programmes, for instance by fostering a sense of identity as a professional (Trede 2012) and through encouraging learners to take responsibility for work and learning goals (cf. Ryan and Deci 2000). This is particularly important for learners who have struggled in school or lack confidence, but it can also be relevant to those whose success in conventional academic settings has not prepared them particularly well for the level of intrinsic motivation and self-direction needed in a professional work environment.

Table 1. A continuum of integration.

	Unintegrated	←————→	Fully integrated
Workplace	Focuses on competence for immediate job, task orientation with pressure to perform		Supports learning for wider practice, space to consolidate, reflect and investigate
	Learner as a subordinate trainee, expected to defer to expertise and hierarchy		Learner as a member of community of practice, encouraged to contribute ideas, reflect critically and question
	Task-based instruction, digital technology only as used for work tasks		Workplace pedagogy, mentoring, extensive use of digital technology to support learning
	Practice is treated as atheoretical and rarely modified beyond a standard repertoire		Practice is both informed by theory and generates new theories leading to modified practice
Programme	Separate, uncoordinated on- and off-job components		Designed and enacted as a co-ordinated and integrated whole both structurally and in terms of relationships between theory and practice
	Standard curriculum with no recognition of previous learning, credit for workplace learning or recognition of learner context		Programme reflects the starting-point of the learner, is tailored to the individual context and accredits relevant learning regardless of source
	Digital technology is used if at all as a substitute for face-to-face sessions and printed materials		Digital technology is used to aid learning in multiple ways using appropriate pedagogies, including in the work-space and through learning communities
	Programme assessment is context-blind and separate from any workplace evaluations		Assessment is integrated, authentic in relation to practice, accessible and respects context
Learner	Passive – directed by instruction and teaching		Active and self-directing – supported by resources, facilitation, discussion and mentoring
Partnership	Minimal interaction, e.g. liaison to discuss progress		Active strategic and operational partnerships with extensive crossover between staff
	No involvement from work organisation in programme design or delivery		Joint programme design, recruitment, delivery and assessment

Organisation and partnership

The organisation of integrated professional programmes can vary by context, but the central relationship is the three-way one between the learner, the employer or workplace, and the educational institution or provider (Dalrymple *et al* 2014), with other stakeholders such as professional bodies, regulators or quality agencies and funding bodies typically on the periphery. Other than where universities employ professional apprentices or trainees it is possible though not common at higher education level for the employer and provider to be the same organisation, but a distinction will normally exist between the work-space and the part of the organisation responsible for the programme. Theoretically it could also be possible for a small specialist unit – such as a research laboratory, museum or academically-linked professional firm – to bring both roles together, but for all practical purposes the standard tripartite relationship can be assumed.

Experience from work-based, partnership and apprenticeship programmes indicate that effective partnerships work at multiple levels, from strategic agreements and high-level champions through joint programme design to collaborative recruitment, delivery and assessment (e.g. McKnight and Birks 2016, UVAC/SDN 2017, Hughes and Saieva 2019). Specific strategies are likely to be needed for partnerships with multiple small firms, such as working with supply chains (Lillis 2018), larger organisations that are willing to act as catalysts or co-ordinators (Rake 2016, Meller 2016), and professional, trade or sector bodies or local groupings (Lester *et al* 2016). Effective collaboration at operational level also involves crossover between staff, so that employer personnel take on aspects of teaching and assessment while academics move closer to the workplace ideally with some practising or consultancy responsibility (Lester and Costley 2010, Meakin and Wall 2013). A model advocated in some fields is the use of ‘practitioner-academics’ or ‘pracademics’, familiar from medicine, where professionals both work as practitioners and have a formal role in the university (Baxter *et al* 2009, Forster *et al* 2023).

Degrees of integration

Table 1 (previous page) summarises some of the salient points from above, contrasting a lack of integration as in a traditional day- or block-release programme with a fully integrated pathway. Further integration can be envisaged, for instance when the work organisation is responsible for the entire programme and the work-space also becomes the primary learning-space (potentially a unitary rather than integrated approach), but the right-hand side of the table represents what is likely to be appropriate and potentially achievable for most mainstream programmes. It should be noted that the two sides of the table represent a continuum (or more accurately a set of continua), and many current programmes that aim to reflect the integrated approach will not demonstrate every aspect to the full extent described on the right-hand side.

Limitations and uncertainties

The discussion above might suggest that, other things being equal, an integrated approach to professional development is preferable to sequential or parallel models. In most instances that assumption is probably correct, but there are situations where other solutions may be more appropriate, both for particular labour market contexts and to meet the needs of learners.

In some occupations and professions the structure of the industry presents obstacles to creating multiple-year training posts, typically because of factors such as a high proportion of sole proprietor and other 'micro'-firms or reliance on short-term projects and funding. The result is that new entrants may move from one short-term post, internship, casual role or self-employed contract to another, sometimes via periods of unemployment; this is discussed for instance by Jagger and Aston (1999) in relation to cultural heritage conservation. In other fields training contracts may be the norm for new entrants, but progression from subsidiary roles can be more haphazard and may involve tensions between working in the current role and training for the new one (e.g. Edmond *et al* 2007 in the context of teaching assistants), or having to change job and perhaps employer to gain access to a suitable working environment. A similar issue can arise when learners, for personal or other reasons, want to extend the period of qualifying or work at a slower pace. Traditionally, routes that are designed to provide a high level of flexibility for situations such as these, such as the ACCA or CIMA pathways in accountancy or the CILEX pathway in law, are modular, rely principally on written examinations and do not promote integration except perhaps through a final project (Lester *et al* 2016). Apprenticeship-type pathways can allow for and even be built around the expectation of changes of job and employer, but the logistics of maintaining more than a superficial level of integration can be challenging. More work is needed in this area to explore how the flexibility associated with a modular programme can be combined with greater integration alongside a potentially disrupted work pattern.

A major factor that remains relatively unexplored is how integrated pathways fit with learners at different stages of their careers. The use of integrated apprenticeship-type pathways for early-career progression, for instance healthcare assistants to nurses and engineering technicians to professional engineers, as well as for early- to mid-career development such as via management and leadership programmes, is well documented (e.g. Lester and Bravenboer 2020, Rowe 2018), as is their ability to substitute for nominally full-time integrated programmes in areas such as healthcare and teaching. In fields such as engineering and accountancy there is also evidence of substitution for sequential pathways involving full-time degrees, including among well-qualified school leavers (Policy Connect/HEC 2019). On the other hand full-time higher education also provides a space for young people to mature, gain self-reliance and develop a sense of vocation and career before committing to a specific occupation or profession. Even among professionally-oriented degrees the numbers progressing to fully-qualified level in the relevant profession can be under 50%: for instance only a third of students who enter an architecture degree typically proceed to becoming a fully-qualified architect (AERG 2013), although more may remain in the profession in an auxiliary role. Examination of statistics from the legal professions (Law Society 2022, Bar Standards Board 2023) indicate a comparable proportion for law. For many professions therefore there is unlikely to be more than a partial transition away from full-time degrees, though there is less reason not to adopt an integrated approach to the postgraduate or professional training phase.

A final factor that needs exploration is whether the more independent, self-directed style of learning needed in integrated programmes favours more mature learners. While British Degree Apprenticeships appear to attract significantly older entrants than those to full-time degrees (Doherty and Holt-White 2021), this is likely to be due to the attractiveness of 'learning while earning' and the tendency for employers to use the programmes as development and accreditation routes for people who are already part of their workforce. On the other hand there can be a transition-shock for school leavers who embark on this type of programme, partly due to the intensity of studying while working and partly from the different approach to learning that is needed. The implication here may be more

one of how school-leavers emerge prepared for learning in real-world contexts than whether integrated pathways are more suited to entrants with previous exposure to work or higher education.

Conclusions and implications

The idea of integrated professional development provides an apposite conceptual category for programmes, exemplified in the UK by Degree Apprenticeships, where participants are located principally in the work-space and are working simultaneously towards an academic qualification and professional recognition. Although it shares underpinnings and practices with work-based learning and work-integrated learning, integrated professional development has a sufficiently distinct starting-point that includes the work-space as the primary location of learning, the presence of a curriculum that is renegotiated and modified in context, the interconnection of theory and practice, and a goal of professional recognition as relevant to the field concerned whether at intermediate, fully-qualified or an advanced level. Integrated professional development aims to build capability as a thinking practitioner and member of a community of practice, develop the skills and dispositions to learn from and for practice, and for those starting their careers bring them to the point of being able to act effectively as practitioners without the need for a further formal training period.

Experience from health professions, from Degree Apprenticeships and similar programmes, and from university-employer partnerships indicates that realising effective integrated professional development can be challenging. Attention is needed to the work environment, particularly in terms of underlying values about work and learning, how work tasks, resources and relationships support learning, and the attitudes and roles of work colleagues. The programme design and pedagogy need to interrelate theory and practice, keeping close to the 'work-face' while being intellectually robust. They need to be able to balance individual and contextual factors with a focus on the programme aims, and are likely to demand different roles from those that are familiar to subject-specialist academics. Digital technology is increasingly central, driven by appropriate digital pedagogies. Learners need to have – and be supported to develop – positive dispositions and effective skills for learning from practice. Finally, effective collaboration is needed from strategic partnerships through practical design and delivery to the tripartite relationship between individual learner, supervisor or mentor and tutor.

At an organisational level this has implications for employing organisations, for higher education institutions and for professional and other regulatory or standard-setting bodies. For workplaces to support integrated professional development adequately there is a need for them to take on at least some of the characteristics of learning organisations (cf. Ackoff 1974 and Senge 1990) and provide an expansive learning environment as put forward by Fuller and Unwin (2008). For some organisations this requires a substantial culture-change from practices based on deference to hierarchy or expertise to ones that are more open, participative and questioning (e.g. Leek 2020, Csizmadia *et al* 2022). For universities, organisational identities and ways of working need to go beyond those associated with research and with running full-time on-campus courses, something that can be challenging both intellectually and at a structural level (Garnett 2016, Lester and Crawford-Lee 2023). The need for champions among senior managers is well-recognised, but the long-term sustainability of approaches such as integrated professional development depends on structural movement within the institution so that the presence of individual champions or enthusiasts and other factors such as favourable funding regimes are no longer critical; what might have once been regarded as peripheral, entrepreneurial or the domain of a 'skunk works' (Rogers 1962) becomes part of the mainstream way

of working. Arguments have been put forward for work-based learning that it needs to form a distinct field of study and research within the university (e.g. Gibbs and Costley 2006, Nottingham 2017), but a shift is also necessary within professionally-oriented academic departments to encompass ways of working that value engaging with, learning from and contributing to the work-space as much as the more traditional ones of researching and disseminating knowledge.

Professional qualifying, registration and standard-setting bodies are rarely involved directly in delivery and variably in assessment, but their policies, specifications and validation procedures can exert a strong influence over the ability of delivery partners to integrate learning effectively. The same applies to national bodies responsible for the standards and quality assurance of higher education or apprenticeship programmes. As a minimum they need to avoid dictating approaches that undermine integration, such as separating academic and practical requirements or mandating inappropriate assessment methods, and ideally move to a position that actively supports an integrated approach. A culture-shift that is still needed in some professions is from being concerned principally with entry requirements and specified training routes to emphasising robust exit requirements and standards at the point of qualifying (cf. Lester 2009), with validation and quality criteria that are able to support innovative programme designs and delivery methods.

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