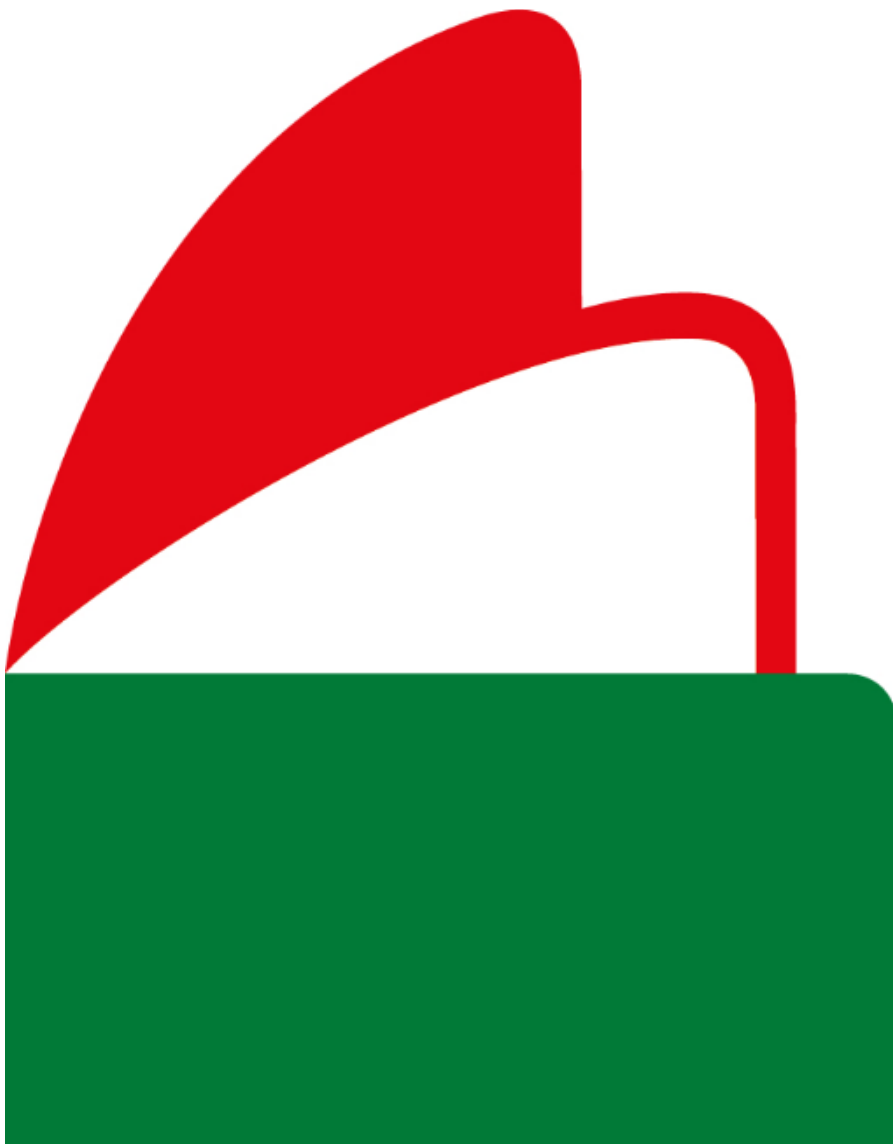




National Approach to Professional Learning: research report

Area of work 10: The Professional Learning Blend



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Welsh Government National Approach to Professional Learning

Area of Work 10: The Professional Learning Blend

1. Introduction and context

The Welsh Government National Mission (2017a) sets out four clear objectives that will enable schools to become “vibrant, inclusive, open, connected, creative, community-based learning organisations, active in wider networks” (p.11). The first of these objectives is to develop a high-quality education profession, and the provision of a new National Approach to Professional Learning, co-constructed with education professionals and policy makers, is fundamental to this.

As part of the co-construction process, 11 small-scale research projects have been commissioned focusing on the national approach to professional learning and its components. This paper is one of these and draws on a review of literature and interviews with key people to address the ways in which the **‘Professional Learning Blend’** may enable effective operation of the new approach. It also considers what professional conditions will need to be in place for a blended approach to the national approach to professional learning to operate effectively in practice.

The use of terminology in this transformational agenda is important. The focus on professional *learning* is correctly distinguished from professional *development* and CPD. Jones (2015) outlines the emerging definitions of each: "It is because professional situations are not static that we can't rely on 'professional development' alone. ... 'Training' is not sufficient; adaptability is essential; lateral and divergent thinking are central; criticality rather than compliance is needed...."

He adds: "'Professional learning' involves active learning; it is a continuing process; it focuses on enquiry, analysis, reflection, evaluation, further action; in its best forms it is collaborative; and it enables an approach which is not confined to a linear interpretation of future events and ways of working." (Jones, 2015.) For the purposes of this paper, we update the term CPD and refer to Professional Learning and Development (PLD) to include both approaches. The focus of this paper should therefore be considered as a blended approach to professional learning and development.

What is evident, is that the focus on professional learning increasingly parallels that of student learning and that the theories informing practice in both are similar (Philpott, 2014). However the processes of learning are complex and context-related. Professional learners are individually different, they work in different school and classroom environments, have different responsibilities and career aspirations, so the processes of learning support must be flexible and appropriate to context. It is accepted now that the 'training' model (Kennedy, 2005) with its reliance on transmission of information or development of specific skills, is only appropriate in specific circumstances (for example, where linear approaches to professional development are needed). The type of professional learning support offered must therefore relate to specific circumstances, such as the identified needs of the individual which may be to develop pedagogical approaches or leadership skills (Crompton et al, 2016; Fluckiger et al, 2014); the purposes of the learning activity or

programme; alignment with national or institutional priorities; or the intended outcomes (if appropriate) for the students and professionals involved (Guskey, 2000; King, 2014). It is clear that a single approach to PLD would be insufficient and ineffective. Where different approaches are involved, these should be coherent and, therefore, 'blended'.

There has been an unacceptable variation in provision and learning opportunity within the education system in Wales (OECD, 2014) and this contributes to inequity of student experience and disparity of teaching quality. Part of the Welsh mission is to develop a *National Approach to Professional Learning* to counteract this. Arguably, geographical, linguistic, cultural social and economic factors in Wales present challenges to professional learning, so the provision of different types of professional learning *support*, in the form of 'blended learning' or a 'learning blend' offered at the national, regional, and institutional level will be vital.

2. Approaches to Professional Learning

The international research base for identifying effective PLD for teachers is growing and shows consistency. Several key characteristics of high quality professional learning have been identified, perhaps the most significant being the shift from something that is delivered to professionals by 'experts' to one where professionals are collaborative, active participants in their own professional learning and growth (Desimone, 2009; Cordingley et al, 2005).

In addition, the focus on professional learning has emphasised the synthesis between individual learning and institutional and system priorities, especially in terms of benefiting pupil learning through system effectiveness (Opfer and Pedder, 2011; Pedder and Opfer, 2011; Hattie, 2003). Labone and Long (2016) identify key characteristics of professional learning: constructivism, sustainability over a long-term period, linkage with institutional and system (especially student) goals and collaboration. Margolis (2017) champions the importance of student voice in informing professional learning priorities and Whitehouse (2011) emphasised the importance of classroom focused learning and included the value of external expertise.

The work of Darling-Hammond et al in the USA (2017) aligns with findings from Australia, New Zealand and the UK in listing the key features of effective professional learning, all of which require different approaches and support. They include:

- opportunities for active learning;
- a collegial or collaborative culture;
- activities which are classroom-based and integrated into the daily life of teaching with a focus on student work and student outcomes;
- coherence with other professional learning activities; and,
- the provision of opportunities to reflect on professional practice.

Timperley (2007) and Timperley (2011) provide a comprehensive overview of the characteristics of professional learning and both studies emphasise the challenges of 'keeping it all going' so that the processes of learning are sustainable, not temporary

or 'quick fix'. Cordingley et al (2015) in their international review of effective professional development, conclude that "carefully designed/aligned teacher CPDL with a strong focus on pupil outcomes has a significant impact on student achievement" (p.4). They go on to detail the components that constitute "careful design" and there are key implications for policy and practice within their findings. James and McCormick (2009) emphasise the importance of school leaders in creating "the space and climate for school staff to reflect on and share aspects of their practice. This includes encouraging and stimulating dialogue and risk taking. In this way innovations can be tested, embedded and sustained.... Without it, they remain *surface changes* that decay and disappear when the next initiative comes along" (p.982, our italics).

It is clear therefore that if the new approach to professional learning is to have an impact on practice, the forms of learning that professionals engage with must be varied and embedded and not singular, dated or transmissive. In short, they should be blended.

3. The Professional Learning Blend

While we have an emerging picture of effective PLD, we also need a definition of blended learning, but, as Oliver and Trigwell (2005), point out: "The term 'blended learning' is ill-defined and inconsistently used. Whilst its popularity is increasing, its clarity is not" (p.24). Our literature review has indeed found 'blended learning' to be a contested term, with multiple meanings.

The term has been used for some time in higher education where the learning of independent adults is enhanced by on-line technology. A small-scale research project on 'a strategic approach to the introduction of blended learning' in one university (Benson and Anderson, 2010) saw blended learning as incorporating technology into pedagogic practice. The Higher Education Academy's definition is simply "Blended approaches use multiple methods to deliver learning, combining face-to-face interactions with online activities" (HEA, undated). Indeed, Oliver and Trigwell in 2005 suggested that the term 'blended' is redundant as, in practice, pedagogic mix is now the norm.

Beyond terminology, Auriccio (cited in Millar, 2015) says, that "blended learning as traditionally conceived (i.e. the combination of face-to-face and online learning) is destined to become a relic of the past". (p. 28). Increased digitalisation, he suggests, will enable '*omni-learning*', "...where online and offline are indistinguishable". (p. 29). The expression '*mLearning*' is used by Crompton et al (2016) to depict learning through mobile technologies. We consider later the ways in which blended learning through the use of technology can enhance professional learning in general.

The development of MOOCs, and the rise in their popularity through platforms such as Coursera and Futurelearn is evidence of widespread acceptance of online interactive learning in general. Though there are well known issues around completion rates and engagement. Later in this paper we will examine a range of variables which influence learner satisfaction in blended contexts.

Welsh Government (2017b) identify 'blended learning experiences' in the context of student learning as "A wide repertoire of teaching methods" where "experience from varied and appropriate environments [is used]" (slide 31). In the induction stage of teaching they would expect that "Learning areas such as the workshop, outdoors, laboratory, studio, gymnasium, library, theatre and classroom are integrated settings for learning, demonstrating discipline and structure appropriate to experience" (slide 31).

The Welsh Government Deputy Director (Pedagogy, Leadership and Professional Learning) responsible for setting up the new approach to professional learning, defined the notion of a learning blend as:

"... the blended learning or the blend is ensuring the maximum impact of all learning opportunities by maximising access to them, by maximising the permanence of the resource that is behind them and by ensuring as far as possible the highest possible quality, ..." (interview notes, August 2018).

The use of the term 'professional learning blend' is helpful and less restrictive. It does not tie us to the bi-lateral definition of traditional face-to-face interactions between teacher and taught combined with on-line support for learning. Instead, it opens up the opportunity for a broader look at how engagement with professional learning may best be achieved. On-line provision is one area; others include individual reflection and enquiry; engagement with professional learning networks; observation of teaching and learning in other classroom environments, institutions and with different age groups; access to student voice; mentoring and coaching; and through professional mobility associated with local, national and international visits.

Teachers from across Wales will already have engaged in many of these forms of provision. The General Teaching Council for Wales offered a range of possible professional learning / CPD activities as long ago as 2002 (General Teaching Council for Wales, 2002, p.24) and it is helpful to see these as potential elements in a mix of professional learning experiences, sometimes blended like a smooth soup, sometimes complementing each other like ingredients in a Welsh cawl.

4. Methodology

A number of approaches were used to gather data for this paper:

- a review of academic and professional literature relating to professional learning and development in general and blended learning in particular;
- a review of recent Welsh Government policy statements and other related documentation pertinent to the ways in which a professional learning blend is defined and likely to be enacted;
- In response to the brief from Welsh Government, case studies were included from professional bodies, and industry. Examples were drawn from an internal research project undertaken by the EWC in 2017 (unpublished), or identified via the literature review. The case studies in the annex were chosen because they illustrate CPD schemes with a blended element either in provision or recording requirements;

- interviews (one face-to-face, the other on-line) with two key players in the Welsh system leading in the provision of the new approach to professional learning and in the provision of on-line learning support for professionals.

International sources were used and the literature search was not restricted to examples drawn from education. Brief examples of non-education sources are provided as appendices to this report.

In searching the literature we looked to address the following questions:

- What is understood by the terms 'blended learning' or 'learning blend'?
- What might a professional learning blend look like?
- How can a professional learning blend have most impact on practice and be of most value to individuals in terms of career long engagement?
- What support is needed from leaders of institutions and national systems to ensure a sustainable professional learning blend?
- What examples of effective blended learning exist outside education?
- What barriers exist to providing sustainable blended learning opportunities for professionals in education?

An interview was held with Dr Kevin Palmer, (Deputy Director - Pedagogy, Leadership and Professional Learning). The interview focused on the rationale for using the term 'learning blend' and the thinking behind the Welsh Government's new approach to professional learning. The interview was recorded and a transcript was made available to all parties for accuracy. Comments made in the interview are included in this report with permission.

An interview was conducted through e-mail with Christopher Owen (Head of Digital Learning Unit) who has strategic responsibility for the outward facing workstreams contained within the wider Learning in Digital Wales programme including: Hwb, the Digital Learning platform for Wales; online safety including web-filtering standards and information governance guidance. This interview sought to identify current on-line provision for professional learning support, the technical and logistic barriers which might exist in embedding this form of professional learning throughout the system in Wales and future opportunities which may provide openings for an expansion of on-line learning at some future point.

5. Findings

Published research on teacher blended learning is often confined to the use of digital technologies in the classroom and the training needs required to ensure that these are used effectively. Research studies often focus on single elements of the professional learning process, such as coaching or professional learning communities, rather than examining what other components of the learning blend may be necessary to ensure the success of particular elements. Much of the research is focused on the use of blended learning in school contexts with young learners, but there is a growing international research base relating to the impact of collaborative approaches to pedagogy and school leadership which employ a variety of approaches to learning (Cordingley et al, 2015).

There is also variability in research findings (Thalheimer, 2017), and this may be due to the contested definition of 'blended learning' or the variety of learning situations which may be evident in a 'blended learning' process. There is a significant number of what may be called 'victory narratives' in which specific aspects of professional learning are implemented and evaluated, with no reported follow up or indication of whether the initiative is likely to be sustainable.

Examples of blended learning components, focusing on their advantages and challenges, include:

The use of digital and mobile technologies

There are a number of advantages to using digital and mobile technologies in professional learning. These include:

- Information can be current – even 'hot off the press' when policy announcements are made or the publication of resources is communicated;
- Time – bite size chunks of learning are available on demand at the convenience of the user;
- Flexibility of delivery. Continuity of teaching and student contact isn't broken because teachers don't need to be taken out of their classroom. Although the classroom may be the focus of learning it is no longer the locus because the learning process takes place anywhere with access to the internet (Rybinski and Sootla, 2017);
- The use of mobile technology such as tablets opens up a wealth of new approaches to learning in outdoor environments and other locations outside the traditional classroom space;
- Ability to overcome time/place constraints on teaching - good indications that the use of blended learning may help in creating alternative stimuli for students (Antoniadis and Konetas, 2011);
- Technology can provide a safe, private learning environment in which professionals can experiment with new skills and knowledge and set their own pace of learning (Martin and Connor, 2017);
- Technology facilitates asynchronous learning;
- The use of media may enhance traditional methods, as with the use of recording to enable individual or collaborative analysis of actual lessons (IRIS, 2018).

Learners and blended learning programmes

Jeffrey et al (2014) highlight the significance of learner motivation and also reported that to be successful programmes need:

- Clear content structure;
- Clear, unambiguous instructions, guidelines and assessment (where appropriate);
- Challenging, authentic tasks;

- Timely and elaborated feedback.

Selim (2007) also addresses the issue of motivation and adds that learner time management skills and some experience and competency with computer applications are also important success factors. Time management was also identified as an important element for positive completion of online studies in Moessenlechner et al (2015).

A number of strategies are adopted by learners when working with online resources on a blended programme. Cornelius and Gordon (2009) describe them as; 'universalists, butterflies, changelings and minimalists' (p.251). These strategies raise questions about learners' engagement with online resources, learners' motivation and the effectiveness of different approaches. An appreciation of these strategies is therefore helpful when considering support issues.

A blended learning approach respects learner differences in style, yet also provides the much needed social interaction that human beings seek and enjoy. It can be cost effective and of equal or higher instructional value to learners. It allows learners to work at their own pace, repeat topics / skip over areas. It enables 24/7 accessibility, has no waiting lists and there are no gaps between when learners want to learn and the learning taking place. It is also consistent – e.g. in web environment there are no instructor variables e.g. lack of sleep, or availability. (Voci and Young, 2001).

Personalisation, is a factor that has an important relationship not only with student satisfaction, but also the overall success and quality in any blended programme (Cuesta Medina, 2018). Nelson (2008, p.11) states that "non linearity, variety of content presentation and exercises, removal of barriers to engagement and letting the learner take control of their learning have all proved...to be effective ways of personalizing the learning experience".

Jović et al, (2017) highlight variables that influence participant's attitude to e-learning, these include, usefulness, ease of use and design. Furthermore, a rich multimedia design of materials will increase students' intention to use e-learning, and generate more positive attitudes.

Coaching and collaborative professional learning

We noted earlier that a key element of effective professional learning for teachers is collaboration (for example Cordingley et al, 2015). What might this look like in a blended context?

The Chartered College of Teaching's chartered teacher programme, builds collaboration and mentoring into its design and assessment (more detail <https://chartered.college/chartered-teacher>). This includes face to face networking and mentoring but also participation in online discussion and debate.

In Wales, the Masters of Educational Practice (MEP) which we discuss in more detail later, also included elements of professional dialogue, professional learning communities, and online discussion boards, as well as face-to-face meetings with

mentors (Daly and Milton, 2017). In the statutory induction programme, Newly Qualified Teachers (NQTs) also benefit from having mentors with whom they share their online induction profile within the Professional Learning Passport (PLP).

Beyond education, the General Chiropractic Council stipulates that at least 15 hours of a mandatory 30 hours of PL must be working with others. Similarly the General Optical Council requires that at least 18 out of 36 'CPD points' must be via interactive CPD.

In health education, De Jong (2014) has found that active, collaborative learning at a distance is possible. A variety of efficient, effective and attractive learning activities can be managed efficiently and effectively online. Face-to-face activities enable learning that cannot take place online (e.g. when non-verbal communication is important), but also makes sure that students and teachers know each other, which makes it easier to collaborate online as well. He adds interaction and communication rules and the role of the teacher in online sessions require extra attention.

Moreover, he says "Blended learning may even make it easier to realize inter-professional collaborative learning". (p.287)

Several studies find that connectivity, a virtual learning community, coaching and peer support were important success factors in blended learning. For example, (Kataria, 2017) found that "lack of social interaction between teacher-student and student-student...can be overcome by designing online environments and activities that are interactive and collaborative e.g. by using technologically advanced tools like discussion forums, blogs, wikis, embedded videos/audios or closed Facebook groups."(p.26). Blended learning helps adult learners to get world class learning experience when traditional HE is simply not possible due to financial or personal constraints.

Whilst virtual environments can provide a wealth of learning opportunities, cognisance needs to be given to the fact that online events within a blended context create very different experience for the learner compared with a more traditional face-to-face approach. Virtual environments can leave learners feeling isolated because they are not coming together in a single room with a facilitator at the front of the class (Hofmann, 2018).

By contrast, a study by Duncan-Howell (2010) examined three online professional learning communities in Australia: one local Australian state-based community, one national Australian community and one international community. Participants in the study were from different geographical locations with a variety of teaching backgrounds and experience. Although geographically the distance between participants in Australia greatly exceeds that of Wales, feelings of professional isolation are not related to distance from the nearest school or university, so engagement with an online professional community would be as relevant to Wales as it would to New South Wales.

Duncan-Howell's survey showed that teachers were seeking participatory learning that focused on practical classroom strategies that were relevant to them, particularly when the aims for PD were identified as positive changes to teaching practices and an improvement in student learning. Teachers felt strongly that "professional learning needs to be practical and authentic" and the research showed that "teachers wanted

to be in control of selecting the content of their PD programmes” (p.338). The findings showed that teacher participation was “topical; members were motivated to participate according to the topic under discussion. This ...transforms their potential for professional learning ‘just-in-time’” (p.338).

The results from this study showed that membership of online communities has the potential to provide teachers with a rich source of professional learning, with 86.7% of participants considering it to be a meaningful form of PD.

Much has been written on coaching and mentoring, especially in an education context, and it will be important to design ways to build these strategies into the learning blend. Stevens and Frazer (2005), writing about corporate learning, say that coaching is often the missing element in blended learning strategy. “Corporate learning must blend learning with systematically integrated coaching and mentoring. This is essential because coaching bridges the gap between skill acquisition and job performance. And only through structured mentoring will a competent performer become a master performer” (p.9).

A Welsh example of blended professional learning: the Masters in Educational Practice

An interesting example of blended professional learning may be found close to home in the Masters in Educational Practice (MEP) programme (Hadfield et al, 2017; Welsh Government, 2015).

The programme was run by an alliance of four Universities (Aberystwyth, Bangor, Cardiff and the Institute of Education at University College London (UCL)) and led by Cardiff University. Welsh Government provided funding support for five years and the first cohort of teachers began the programme in the autumn of 2012. The programme ended in 2017 with the non-renewal of funding support.

The MEP provided an excellent example of a blended approach to professional learning, providing challenge and support for Beginning Teachers through:

- experience of advanced study to achieve an academic Master’s award, including critical engagement with academic and professional literature;
- the allocation of a trained External Mentor drawn from a wide ranging pool of experienced professionals;
- the formal support of a School-based Mentor designated to the role by the school’s senior leadership and trained by the MEP team;
- structured and continuing professional dialogue with mentors both in school and during programmed Learning Event Days at an external venue;
- critical professional dialogue based on observation of teaching in the first year of the programme;
- an emphasis on reflective, research-informed practice through critical enquiry of their own teaching and professional learning;
- face-to-face professional support from academic tutors for completion of the Master’s modules and professional enquiry;
- the formation of professional learning communities which provided opportunities for Beginning Teachers to engage in secure, critical discussion

- on line – blogs and on-line discussion boards enabling teacher to teacher and teacher to mentor interaction;
- engagement with dedicated resource support and other academic and professional materials in English and Welsh through a Virtual Learning Environment;
- access to over 4,000 electronic journals plus the Curriculum Resources collection of the UCL Institute of Education;
- Guidance and support in maintaining a Professional Learning Journal to record and enable critical reflection on professional learning.

The blend of experiences offered through the MEP was not only unique in Wales but provided a model for blended professional learning internationally. At the time of writing it is unclear whether a full, formal evaluation of the impact of this blended learning programme is available or forthcoming.

Challenges in sustaining blended approaches

A professional learning culture

A system-wide culture of professional learning is fundamental to the success of the National Approach to Professional Learning, however it is to be delivered. As we have found, much depends on the motivation of the learner and their long term goals (Li et al, 2016 and Jeffrey et al, 2014).

From the education workforce survey (EWC, 2017), the main issues around participating in CPD were: conflict with work/not enough time (Further Education teachers 70.9%, school teacher 56.5%, Further Education learning support workers 51.8%, school learning support workers 35.0%) whilst supply respondents indicated a lack of awareness of opportunities (supply teacher 35.8%, supply learning support workers 32.9%). These findings seem to be common across professions with a lack of time for self-study cited as the number one barrier for learning (CIPD 2017).

Recent national developments such as the new professional standards for teaching and leadership, the Digital Competence Framework, and the launch of the National Academy of Educational Leadership should all have a significant role to play in overcoming barriers and creating the optimal conditions for cultural change. Although these are still in the early stages of development, there seems to be significant optimism across the system that good progress will be made. There is a role for Initial Teacher Education in preparing teachers to work in increasingly technology-oriented schools. The inclusion of educational technologies, however, does not necessarily lead to the creation of contemporary educational environments (Rawlins and Kehrwald, 2014).

A bigger question might be how far the professional learning culture should extend, when our learners and educational professionals (including supply workforce) can also find themselves in other settings, for example, youth work groups, further education, and private nurseries which are outside of the 'self-improving system'.

Geography and Infrastructure

Although Wales is a small country, it has remote and rural areas with poor connectivity and often with poor transport accessibility. There are additionally areas with patchy broadband and 4G coverage (Ofcom 2018). Coupled with the fact that the schools are spread across 22 local authority areas, this presents some key challenges. Welsh Government have attempted to mitigate by investing in Hwb and Learning in Digital Wales and producing 'Education Digital Guidance' for schools. Any online learning programmes will also need to be developed to be used across multiple platforms, devices and operating systems. Hwb and the Professional Learning Passport are examples of national platforms which have successfully overcome some of these issues.

Current ongoing research by Coker and Redford (2018) focuses on the importance of blended learning approaches in reaching professionals working in rural areas. Their research, being undertaken in the north of Scotland, bears many similarities to the experiences of teachers working in rural communities in Wales. They argue that "rural teachers, like rural children, should not be excluded from access to quality learning environments, because of the geographically disparate context in which they work" and comment that "enabling the flow of professional capital across rural areas can be challenging ... as rural teachers often work in relative isolation from their professional peers." (unpublished presentation, 2018). Their research examines "the experiences of teachers working in the North of Scotland and highlights the factors that influence teachers' engagement with formal and informal professional learning opportunities, with a focus on the potential of technology."

Some of their findings will resonate with teachers in rural Wales who may regard themselves as 'lone practitioners', engaging in self-directed learning and having to work harder than urban colleagues to access opportunities. Time, cost and distance are seen as barriers to professional learning and there is a feeling of being disconnected from the national dialogue, of having to work harder to stay in touch with current professional thinking and in some cases to a loss of confidence in their own practice. The use of technology is an obvious solution to the problems of remoteness but emerging findings from the research show that infrastructure and connectivity are 'patchy', and accessing on-line sources is not guaranteed. In addition to problems with connectivity and the slow roll-out of broadband the lack of physical resources such as up-to-date hardware was an issue. Unsurprisingly, teachers feel that a sub-set of technical skills is missing from their professional experience and some resistance to gaining this is implied. Social media was discussed as a way of accessing the national / international dialogue separate to professional learning but there are feelings of guilt in some cases as this crossed the work/home boundary.

It is clear from this research that investment in infrastructure is important but there is also a need to engage with the mediating role of technology, particularly within the context of rural place. The learning blend in this, and in similar environments in Wales, must accommodate new technologies alongside face-to-face opportunities for meeting and working with other professionals, finding space to discuss, space to share ideas, forging wider connections, and hearing different views.

Language

As a bilingual country, the blend will need to consider the fact that practitioners may be working via the medium of Welsh or English. There is an expectation that all professional learning will be available in both languages. Data from the EWC's Register show that 33.3% of registered school teachers are Welsh speakers (EWC, 2017a). The proportion of NQT's using their online induction profile in Welsh is consistent with this at 37% (EWC, 2018).

The demand for provision through the medium of Welsh is likely to increase in future years in line with the Welsh Government strategy for one million Welsh speakers by 2050. This will impact upon costs and development time for all elements of the learning blend.

Financial considerations

If the blended learning approach is to be embraced and for the technology-focused elements to operate effectively there needs to be significant investment in terms of resources and infrastructure, both at the initial set up and also with a longer term commitment to ensure it remains flexible, and sustainable. Demonstrating value for money will be fundamentally important, particularly given the current economic climate.

6. Conclusions and implications

System

We have highlighted a number of professional learning initiatives in Wales, for example, the MEP, statutory induction for school teachers, and the Professional Learning Passport, and there will invariably be valuable lessons to be learnt from these system-wide experiences.

Two research studies of early years education demonstrate an irony in the fact that whereas young children and their teachers may be familiar with new technologies there is some way to go before there is coherent application in terms of pedagogy. Nuttall et al (2015) state: "...teacher uptake of digital technologies in early childhood education and their use with young children in play-based approaches to learning have not been strong." (Nuttall et al, 2015 p.222). And this is echoed in a larger research project by Palaiologou (2016) who states that "although teachers are digitally competent in their personal lives, there is a dominant ideology regarding the nature of play-based pedagogy that hinders the integration of digital devices into their practice" (p.305). Wales, it seems, is making better progress in Early Years Education. The Estyn report on preparing for the Digital Competence Framework (Estyn, 2018) states: Practitioners in the foundation phase feel competent enough in most aspects of the DCF to enable them to support pupils appropriately. Practitioners in key stage 2 and above are less secure in delivering the full range of digital skills" (p.4).

Confidence in progress in Wales was also expressed by the Head of the Digital Learning Unit who stated: "The Learning in Digital Wales programme is unique in terms of the breadth of the offering. I regularly engage with other nations who are offering national solutions, but the engagement statistics in Wales generally outperform any other national implementation" (interview response, October 2018).

There is optimism therefore, but the need for blended programmes of professional learning, which include coherent and well-designed experiences of digital technologies, continues to be an urgent priority. It is also essential that any professional learning programme relating to the digital competence framework must model the best of what is expected of student learning in classroom situations.

However, one of the key challenges in all aspects of maintaining credible and appropriate professional learning opportunities is the ever-increasing pace of change. In its review of the Hwb+ digital learning tool for schools, Welsh Government reported that the contract for the resource would not be extended after 2018 because “... technology has moved on significantly and so have the needs of our teachers and learners” (Lewis, 2018). Provision through a professional learning blend allows for flexibility of method and resource and would be the most appropriate way of ensuring that each of the components of a blend is fully up-to-date and relevant to these changing needs.

Learner

Learner characteristics and motivations are influential factors in the effectiveness of professional learning.

Ausburn’s study, (2004) highlighted that awareness that adults may value options, variety, and self-directedness in their learning opportunities can help guide effective instructional design that will attract and retain adult learners. Adult learners placed high value on effective two-way communication with classmates and instructor. Li, Marsh and Rientes, (2006) found that the long-term goals of learners (i.e. qualifications and relevance of modules to learners’ professional careers) are important predictors of learner satisfaction.

The effectiveness of a blended learning programme also depends on learner readiness to embrace technology-enabled learning (Institute for Adult Learning Singapore).

Design

Research undertaken by the Teacher Development Trust (2015) highlighted that for professional development to be effective, there must be sufficient opportunity for learner connectivity, collaboration and peer to peer working and support.

In a 2006 study, Li, Marsh and Rientes found that learners who were more satisfied with the quality of teaching materials, assessment strategies, and workload were significantly more satisfied with the overall learning experience. A vast body of research has highlighted that instructional design and the quality of learning materials are crucial in creating an effective online learning experience.

The learning platform should be as simple and user friendly as possible (Luka et al, 2012). The usability of any e-learning system is an important determinant of students’ actual use of e-learning (Wu and Hwang, 2010). Without knowledge of underpinning pedagogical design of these technologies, and an alignment with this, the use of online learning environments may remain an underused and ineffective resource in teaching (Owens, 2012).

The online element of the blend, is only part of the wider professional learning experience. As we are developing a national approach, in order to create synergy, the blend needs careful consideration from the design stage in order that all elements are meaningful, are the right medium, and are fit for purpose. "...The relationship between the face-to-face and online activities must be carefully considered to use the strength of both modes, thereby providing a richer experience than using either of the two on their own" (Paskevicius and Bortolin, 2016).

Implications for policy makers

- A coherent strategy, with clearly defined roles, key performance indicators, ownership and a marketing plan, evaluation and continuous improvement;
- A national learning programme should allow for greater consistency, regardless of location, language, phase, and incentivise infrastructure improvement;
- Quality of resources and platform will be key. Wu and Hwang (2010) state that a useful e-learning system should be defined by users, and managers should modify based on feedback;
- Funding - set up costs can be high (Bhote, 2013), but blended learning can also be cost effective (Scott, 2016);
- Pedagogy is still key regardless of media. Without knowledge of underpinning pedagogical design of these technologies, and an alignment with this, the use of online learning environments may remain an underused and ineffective resource in teaching (Owens, 2012) and (Cuesta Medina, 2018);
- Within the larger culture of professional learning, there may be attitudinal barriers to a blended approach (Davis, 2016). The ways in which the professional benefits of blended approaches are communicated and owned by the profession are key to their strategic success;
- Evaluation, data and reporting - Many learning management systems offer metrics that can be used to measure participation and completion., e.g. real-time user tracking, pages visited, links followed, modules completed, assessment scores and satisfaction survey results (Jones, 2013). Such information can be useful for refining the design / delivery / content of any programme on an ongoing basis, making it more responsive to user needs. This data would also feed into any wider evaluation;
- Sustainability -the national approach to professional learning and a commitment to a blended approach will need a long-term commitment from all stakeholders, and will need to be responsive to changes in the macro and micro environment e.g. technological, political, and economic.
- Learning from previous professional development programmes such as the MEP, CPD funding programme administered by GTCW, the Early Professional Development Programme and our continuing experiences of statutory induction, PLP and Hwb.

The fact that professional learning is 'blended' does not mean that it will necessarily impact on professional effectiveness. A blend of poorly designed learning experiences may still fail to motivate teachers and improve teaching quality. Underpinning the provision of blended learning support must be careful and appropriate design of learning experiences, a culture of critical professional learning, collaborative engagement within and beyond the classroom, school and region, and a sense of sustainability which ensures that short-term objectives will be part of a longer process which values professional learning as fundamental to professional working.

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Annex A Case studies

1. British Computing Society

Continuing Professional Development

Continuing Professional Development (CPD) is the organised continuation, improvement and broadening of knowledge, understanding and skills, as well as development of personal qualities necessary for an individual to maintain their competence in order to undertake their duties throughout their working life.

Type of scheme

Mandatory for Chartered Members. Needs-based. No specific hours or points – webpage states that it has moved on from hours/points based approach to a process of reflective learning. Chartered members need to revalidate every 5 years.

The Learning Blend

Non-prescriptive scheme. Members are free to select CPD activities relevant to their need, but there needs to be a focus on reflection. Encouraged to do different types of CPD activity. Guide provided re types of CPD, suggested resources and how to retain evidence.

iTunes U provides access to more than 200,000 educational audio and video lectures, language lessons, audiobooks and podcasts - all available free from the iTunes Store. With BCS, members have access to collections of material, including academic papers, interviews, lectures, video debates, articles, reports and podcasts relating to computing and IT.

Recording and audit

Those applying for Chartered membership are subject to validation process and application will be reviewed by peers. The process starts with an online application including personal statement detailing competencies under the headings of autonomy, influence, complexity of work, business skills and breadth of knowledge - which is assessed against the CIP standard. Those holding a degree with full CIP accreditation do not need to complete breadth of knowledge statement. Application needs to be supported by an employer, client or a colleague working at the same level, or above. Applicants are required to do a 10 minute presentation and will have an assessment interview online of up to one hour. Progress can be checked via online portal. Successful applicants will be confirmed on the public register. CPD can be recorded using the BCS Personal Development Plan.

2. Chartered Institute for the Management of Sport and Physical Activity

Type of scheme

Mandatory for those at certain membership grades. 10 points per year at a level relevant to membership grade.

The Learning Blend

A minimum of 5 points should be 'endorsed CPD' i.e. CPD that has been mapped against and aligns to relevant industry-recognised professional standards. Remaining 5 points can be from category 2 – developmental. This is development that does not map against standards but has been recognised as supporting ongoing career development. Table of CPD activity available which indicates evidence required and points available. Members can complete all CPD points from category one if they so wish. Members can identify low cost CPD on their website. Members have access to over 1,300 eLearning options as part of their annual subscription. 350 CIMSPA recognised opportunities available. External CPD policy – on a case-by-case basis, CPD activities provided by organisations not yet CIMSPA partners may be recognised, but this will fall under the developmental category. In future increasing priority will be given to CPD delivered by official CIMSPA skills development partners.

Recording and audit

CPD activity can be registered. Members upload evidence such as a PDF or photo of a certificate or a screenshot of a completion record. Successful submissions will be added to membership record within 10 days.

3. Cardiff and the Vale College

Cardiff and the Vale College and the Royal Airforce Personnel Support (HR) branch have launched a new learning initiative for RAF service personnel. The Chartered Institute of Personnel and Development programme level 5 certificate in Human Resource Management for Military Personnel is aimed at providing career development for serving personnel and to enhance post-serving qualifications of those leaving the force.

The Learning Blend

The college will deliver the CIPD programme across the UK using a blended approach. In addition to the online delivery or face-to-face lessons, students can book bespoke tutorials with their course tutor via Skype, Face Time or telephone. The flexible method, means the course can be completed in as little as eight months, or can be completed over two years.

<https://www.fenews.co.uk/press-releases/20279-cardiff-and-vale-college-partners-with-raf-to-offer-top-flight-hr-training>

4. British Petroleum

British Petroleum employ a blended learning approach within their graduate schemes. Graduates start with an induction and embedding in the specific role, and this is complemented by a blended learning approach combining online and virtual learning with face-to-face classroom-based training. This serves to provide graduates with the required behavioural and technical skills to help them to progress in their career. Graduates are further assigned a buddy and a mentor to help them to navigate the organisation, and to ensure continued development.

Further Details:

<https://www.bp.com/en/global/bp-careers/students-and-graduates/graduate-opportunities/supply-trading/europe.htm>

5. Swire

Swire have adopted a blended learning approach for their management trainees, who may be deployed in various business settings across a geographically diverse area. Core to their role is a need to understand the organisation's Code of Conduct. ELearning was seen to address the issue of delivering a consistent package of learning across their range of offices across Asia. The business ethics module served to assist trainees in knowing how to apply the code of conduct to their day-to-day activities. Learners are given a scenario / ethical dilemmas and are required to reflect on certain elements. They can print out their reflections for use in a face-to-face workshop. The course closes with a quiz-based challenge which highlights their performance and understanding level prior to attending the workshop. The E-learning element serves as a foundation for a broader programme of face-to-face training on Business Ethics.

Further Details:

<https://au.kineo.com/case-studies/swire-group-scenario-based-learning>