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Research report for external body :

Thomas, J. *NAPL Area 3 Report: Critical Review of the current Professional Learning Model.*

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Executive Summary

In response to disappointing outcomes for Welsh pupils in the Programme for International Student Assessment (PISA) in 2009, Welsh Government has been proactive in analysing, evaluating and acting upon the recommendations arising from policy scrutiny from a number of expert advisors. As Welsh Government progresses through its comprehensive reform of all areas of education in Wales, it becomes increasingly apparent that if the reforms are to achieve the aims stated in *Education in Wales: Our National Mission (2017)*, new skills and knowledge bases will be required for new entrants to the profession, for the existing teaching workforce and for those who will lead them.

Professional Learning, what was previously referred to as Continuous Professional Development or In-service training, has long been recognised as a means of exploring new methods of curriculum delivery, and time allocated to training is firmly embedded in the school calendar. The strength of this approach is that it allows schools to identify their own priorities for development and source the training input they feel is most appropriate to their circumstances. The disadvantage of such a system is that there is little coherence across schools. In 2015, following the publication of OECD's *Improving Schools in Wales (2014)*, Donaldson's *Successful Futures (2015)* and Furlong's *Teaching Tomorrow's Teachers (2015)*, The Welsh Government made a commitment to the development of a professional learning model which would drive a focus on those aspects of classroom practice identified in the reports as being key to the development of the skills that would be required for the successful implementation of their recommendations.

The New Deal for the Education Workforce was developed as a professional learning model in 2015. It currently comprises four areas of study, which are referred to as 'modules' in the following report. They are: Effective Collaboration; Reflective Practice; Effective use of data and Research Evidence, and Coaching and Mentoring. The modules provide an overview of the key aspects of each area and include a range of case studies and questions for reflection to further support a deeper understanding of the issues discussed. Each booklet is clearly presented, informative and accessible. Nevertheless, despite there being many positive elements, this critical review of the modules identifies some issues that require further attention:

Intended audience. It should be clearly stated on the Learning Wales website and in each of the booklets that these modules are intended as support materials for training providers and/or facilitators. This will ensure that individuals who access the materials via the website are aware that any activities included are designed to be addressed in an organised training situation.

Development of clear objectives for each module. The current materials are very informative but the aim of each module is unclear. This is perhaps a result of the intended use of the booklets as support materials, with facilitators expected to identify their own outcomes for their training programme. Clear guidance to facilitators would bring greater coherence to the focus of training programmes regardless of the training provider.

Use of the Professional Learning Passport (PLP) as a platform for logging engagement. This will encourage teachers to record, monitor and review their participation in professional learning activities and identify their own goals for future development.

Differentiation of the learning materials to reflect the level of experience of participating teachers. Ingvarson et al (2005) highlight the need to develop professional learning materials that are differentiated to reflect the range of experience of teachers undertaking the training. The booklets should aim to include activities for those new to the ideas presented and those who may be more experienced to ensure that there is sufficient challenge and thus maintain motivation.

Development of evaluation tools for monitoring the impact of the training materials. The DfE (2013) indicates the need to find out whether the initiatives being implemented are having the desired effect, thus indicating a need for evaluation of professional learning activities. Goodall et al (2003) recognise 'the difficulty in teasing out what factors contribute to student learning' (Goodall et al, 2003, p.106) and explore a range of techniques used to evaluate the effectiveness of CPD which could be useful in establishing appropriate methods.

Clear link to time allocation aspect of proposed new model. The allocation of time is rightly included as a distinct aspect of the proposed new National Approach to Professional Learning. This should be reiterated in the booklets themselves so that facilitators can ensure that the time necessary for activities is made available to them. This will also ensure that professional learning is seen as a valued activity, integral to whole school development.

Rethink the use of INSET days and consider thematic delivery. Schools in Wales currently benefit from 5 INSET days, set at the school's discretion and usually distributed across the school year. In order to ensure that the key themes identified are given sufficient time and attention, having a thematic approach to training could be considered. This would ensure that these key skills are revisited regularly throughout the school year.

Whilst not relating directly to the review of the literature underpinning the four modules, the study of the literature which informed their development also suggested that two further modules addressing Assessment for Learning and Differentiation would be beneficial. References to these two areas can be found in the existing materials however, there is a great deal of research to inform materials development in both of these areas and they could therefore be more fully developed into distinct strands to better reflect the OECD (2014, 2017) recommendations. This would ensure that quality materials are available to support work in the key areas of classroom practice highlighted as essential to the success of reform implementation.

The proposed new National Approach to Professional Learning has a further element to it which will strengthen the existing materials, and that is the link to the Professional Standards for Teaching and Leadership. Published in 2017, these new Standards express the expectation that teachers will be able to demonstrate the skills that the New Deal materials aim to develop. If these materials are to be revised, and the two additional modules developed, there is an opportunity now to ensure that all materials are clearly mapped to the new Professional Standards so that teachers can directly relate their professional learning to those skills which are expected of them.

The proposed new National Approach to Professional Learning has the potential to give more structure, coherence and purpose to the range of professional learning offerings available to teachers. Implementation, however, will not be without its challenges and the monitoring and evaluation of training provision will be key to ensuring its success.

1. Introduction

The current professional learning model, the New Deal for the Education Workforce, has its origins in an educational landscape that has evolved rapidly since it was first introduced in 2015. Changes to policy which are now taking place across all sectors of education, from Initial Teacher Education, through to Leadership development in addition to curriculum and assessment reform, will require changes to classroom practice if we are to ensure their success. Moreover, issues such as Wellbeing, which have not previously been addressed in either pre-service or in-service education, are now rightfully considered of high importance and the expertise of the Special School sector is increasingly drawn upon to inform practice in differentiation and personalisation in mainstream schools. The pace of change is such that any new professional development model needs to do more than simply provide information; it needs to encourage in participating teachers a desire for ownership of, and commitment to their own learning. In other words, it needs to take the teaching workforce with it. However, as one of many competing demands on teachers' time, professional learning must have a clear purpose to which teachers can relate and from which teachers can develop the skills and strategies required to understand the challenges and changes they are facing, and to tackle them successfully.

Classrooms, whether in Wales or elsewhere in the world, are complex, constantly evolving environments, and teaching therefore requires mastery of a complex set of skills to guide, motivate and facilitate learning. Teaching is not a skill that, once learnt, remains static and immovable. It is one which needs to adapt as pupil profiles, technological advancements and greater global awareness shape and inform our attitudes towards existing and future knowledge bases, driving our desire to ensure that our pupils are given the best possible opportunities to develop into well-rounded, well-informed individuals exhibiting the qualities encapsulated in the Four Purposes of the curriculum outlined in *Qualified for Life* (Welsh Government, 2015, p.4).

In order to involve all educational professionals in this endeavour, including those who support teachers in their role, a critical understanding of the affordances and constraints of the current Professional Learning model is required. The aim of this report is to critically evaluate the literature which informs the materials available to teachers and training providers in the form of the four New Deal modules accessible through Learning Wales, namely: Coaching and Mentoring; Reflective Practice; Effective use of Data and Research Evidence and Effective Collaboration. The Leadership module is not being evaluated as part of this review as it does not provide training as such but rather informs potential Leadership candidates of the content they can expect from Leadership training provided by the Regional Consortia.

To better understand the rationale behind the creation of the modules under review, and assess their relevance, it is also necessary to understand the factors that have driven the comprehensive reforms within the Welsh educational system, the success of which will depend on the demonstration of new skills within the workforce.

1.1 Background to the reform agenda

Much of the current reform agenda set by Welsh Government has been driven by the poor Programme for International Student Assessment (PISA) results observed across the Principality since pupils in Wales first participated in the assessments in 2006. Indeed, despite recent improvements in certain areas of national exam performance, Wales has had the poorest PISA results of any of the four nations which make up the United Kingdom and significantly lags behind pupil achievement in the same tests in England (see Table 1). Poor PISA results have often created what is termed a “PISA shock” which has provided the catalyst for significant reform of educational systems as was noted in Germany in 2000 (Waldow, 2009). Critics have argued that this has resulted in an undue prioritisation of the skills tested in the core PISA subjects and that ‘the impact of PISA’s narrow focus on math, science and reading on national education systems in terms of a ‘powerful back-wash” effect cannot be underestimated’ (Froese-Germain, 2010 – p.14). Concerns have also been raised about the validity of PISA results whereby the exclusion from the sampling of certain groups of pupils may have led to skewed outcomes (Lingard, 2016), and where the decontextualized nature of the assessments may be impacted by cultural and linguistic factors (Grek 2009). Moreover, the cross-sectional design of the testing would seem to be at odds with OECD’s own aims for the testing. As Hopfenbeck et al (2016) note, ‘The purpose in the initial documents stated that PISA would provide evidence on students’ capacities to continue learning throughout their lives’. (Hopfenbeck et al 2016, p.333) yet the current testing system provides a series of snapshots of educational performance at age 15 and does not evaluate pupil success in relation to entry to higher education or employment at the end of formal schooling. Despite these concerns, PISA remains the most influential International Large Scale Assessment in terms of its propensity to drive education reform and policy in participating countries.

1.2 Programme for International Student Assessment (PISA)

The PISA international assessment of performance in Science, Reading and Mathematics is undertaken every three years by 15 year olds across 72 OECD member and non-member countries. Tests last 2 hours and are agreed by all participating countries in advance of the testing period. Each round of assessments focuses on one of the three core subjects of Science, Reading and Mathematics. The most recent of the PISA assessments for which we have data took place in 2015, involved some 540,000 pupils and had Science as its focus. This autumn (October/November 2018) the PISA tests will focus on reading skills and are designed to assess not only whether children can understand the text by locating relevant information but also whether they have the ability to evaluate the content and the sources. As such these assessments, which require the application of associated skills, might be more accurately described as written literacy tests, rather than reading tests. All PISA tests contain an applied element as they are designed to relate to experiences of problem solving that pupils are likely to meet in their everyday lives and increasingly in their careers going forward. It is the ability to apply the knowledge gained through formal study that has sometimes proved problematic for pupils.

Table 1 PISA 2015 results

	UK	England	Wales	OECD average
Science	509	512	485	493
Reading	498	500	477	493
Mathematics	492	493	478	490

OECD Country note for UK, 2015

More detailed analysis of the OECD statistics also shows that the percentage of top performing pupils in Wales is significantly lower than the OECD average, suggesting that Wales' top performing pupils do not reach the same level as top performing pupils in other educational systems in the OECD testing area (see Table 2).

Table 2 Percentage of top performing pupils

	OECD average (%)	Wales (%)
Science	8%	5%
Reading	8%	4%
Mathematics	11%	5%

OECD Country note for UK, 2015

In light of these worrying trends, Welsh Government has undertaken to reform the educational offering in Wales through changes to curriculum format, Initial Teacher Education, Additional Learning Needs provision and Leadership training as part of their National Strategy. The stated aim to “continue to transform the education and skills sector through supporting and expecting teachers and educators to develop their skills” (Taking Wales Forward 2016-2021, 2016, p.9) emphasises the requirement for personal engagement with professional learning that underpins the development of the learning materials under discussion in this report.

1.3 The evidence underpinning educational reform in Wales

The Welsh Government has been proactive in its response to the concerns raised around standards of achievement and attainment in Welsh schools. Three key commissioned reports have informed the reform agenda in Wales and contributed to the creation and now revision of a professional learning model in Wales: Improving Schools in Wales (OECD, 2014), Successful Futures (Donaldson, 2015), and Teaching Tomorrow's Teachers (Furlong, 2015).

1.3.1 Improving Schools in Wales: An OECD Perspective (2014)

The OECD (2014) report provides a comprehensive overview of the educational system in Wales and a strategy for its improvement. With particular regard to the issue of professional learning, it highlights the need for teachers in Wales to differentiate and personalise learning, stating that ‘For schools to improve, it is essential that teachers continuously develop and add value to their teaching knowledge and skills to best respond to the learning needs of different students in different contexts.’ (OECD, 2014, p.83). They also draw attention to the lack of coherence in initiatives relating to school-to-school collaboration and suggest that it should ‘be integrated with other continuous professional development strategies’ (ibid, p.84). They argue strongly for the need to ‘ensure quality continuous professional development at all career

stages' (ibid, p.83) so that in-service teachers can respond rapidly and effectively to changing demands.

1.3.2 Successful Futures

As part of The Welsh Government's review of education, though not directly arising from the OECD recommendations, Professor Graham Donaldson was invited to undertake a comprehensive review of the curriculum and assessment arrangements in Wales resulting in the publication of *Successful Futures* in 2015. His recommendations, which he described as 'radical and wide-ranging' proposed a reorganisation of subject content into Areas of Learning and Experience to encourage broader thematic teaching reinforced by over-arching core strands in literacy, numeracy and digital competence. Donaldson recognised that these recommendations would have significant implications for the teaching workforce and that new skills would be required. He made clear that there would be a 'Need to 'build the confidence and capacity of teachers...' (*Successful Futures*, 2015, p.112) and proposed that 'an extensive and sustained programme of professional learning should be developed to ensure that the implications of the Review recommendations for the skills and knowledge of teachers and other practitioners are fully met' (p.118).

1.3.3 Teaching Tomorrow's Teachers (John Furlong, 2015)

In a parallel initiative, Professor John Furlong completed his review of Initial Teacher Education (ITE) in Wales detailed in *Teaching Tomorrow's Teachers* published in 2015. In it he states: "If Wales was to achieve the school system that it needs and wants [...] it needs teachers who:

- Take personal and collective responsibility for professional development
- Are able to evaluate and use different sorts of evidence relevant to the improvement of practice
- Are willing to work collaboratively with other teachers and other professionals ...
- Are willing and able to work in ways that draw on best practice from across the UK and internationally.

Furlong (2015, p.6)

Whilst these recommendations focus on changes required in Initial Teacher Education, they are equally relevant to ongoing teacher professional learning and strongly influence the rationale for the development of the four modules under discussion. In a precursor to Furlong's report, Tabberner (2013) also carried out **A Review of Initial Teacher Training in Wales** in which he noted:

'The historical problem starts with a relatively weak role for research in guiding educational practices.' (Tabberner, 2013, p.24) and his recommendation 'That ITT providers take urgent steps to strengthen research engagement among tutors and trainees so that teaching and teacher training are strongly influenced by practical, scientific inquiry methods' (ibid, p.25)

The new criteria for the accreditation of ITE reflect these recommendations and make research awareness and research activity a key requirement. As a result, new entrants to the profession will be better prepared, and keen, to continue what they have practised during

training but will need the support of their mentors and colleagues to do so. This will require those colleagues to be trained in order to maintain momentum and provide support.

Professional Learning now appears as one of the strands (leadership) of the revised Estyn inspection framework (2017), and as such, school leaders who must focus on the need to develop targeted training linked to school and personal needs, must have access to professional learning materials that support that training.

1.4 Key components and strategic objectives of New Deal

The New Deal for the Education Workforce model of professional learning was developed in 2015 to respond to the recommendations of the reports discussed above. In its current format, it comprises four distinct learning modules and presents professional learning as a vehicle for change management. It has developed from the recommendation that 'requires the profession to take greater ownership and responsibility for their ongoing professional development...' (Qualified for life, 2015, p. 12). The resources are intended to provide a tool for training providers and/or leadership teams charged with enhancing teaching and learning in their schools and aim to encourage teacher development in areas currently underdeveloped but seen as key to improvement in teaching quality.

The need for this focused professional development was highlighted in the OECD (2014) *Improving Schools in Wales* report which noted that 'A clear challenge to improving the professional capital of Welsh teachers is the limited availability of high-quality continuous professional development opportunities.' (OECD, 2014, p. 83). The report highlights a number of teaching skills they see as essential for 21st century practice:

- Understanding Learning to Improve Teaching Practices;
- Inquiry-based teaching and learning;
- Incorporating assessment into teaching and
- Collaborative learning.

Two of these themes (inquiry-based learning and collaborative learning) are addressed in the New Deal modules. However, formative assessment, although touched on in the Data and Evidence module does not form part of the current professional learning offering and the lack of progress in this area was again noted by OECD in its Rapid Policy Assessment (OECD, 2017, p.31). Also highlighted in both reports was the need to develop skills in differentiated teaching (ibid, p.31) and that is also absent from the current professional learning offer.

2. Methodological approach to the critical review

The New Deal for the Education Workforce is an initiative launched in 2015. It puts professional learning at the heart of change management. It supports the need for professional learning to be reflected in school development plans, designed to ensure that schools become the Learning Organisations promoted by OECD. The New Deal is designed to form a national framework to give coherence to training content, but, as yet, offers no mechanism for assuring the quality of delivery

This study will evaluate the strength of the literature upon which the New Deal model is based and will explore what changes if any should be made to the model to ensure it supports the

ongoing educational change agenda in Wales. The following key questions will drive the focus of the critical review:

1. What are the key components and strategic objectives of the New Deal for the Education Workforce?
2. What is the evidential and conceptual framework which underpins each element?
3. How far does the New Deal model map across to the research-supported examples of best practice in professional learning identified in **Area of work 1** (Overview of the model)?
4. To what extent can the aims of the New Deal be met through the implementation of the new National Approach to Professional Learning?
5. Might any weaknesses in the new model for professional learning hinder the delivery of the New Deal for the Education Workforce?

The final section of the review will focus on the relationship between the proposed new National Approach to Professional Learning and the existing New Deal model, discussing the extent to which the new model can facilitate meeting the aims of the New Deal and highlighting any issues which might hinder its delivery.

Each of the four existing modules is accompanied by an information booklet and two of the four have additional Powerpoint presentations to support group teaching. This evaluation will focus primarily on the literature supporting the arguments presented in the information booklets, as not all 'modules' have other supporting materials. Each will now be examined in detail.

3. Findings

3.1 Effective Collaboration

Rationale for module – evidence of effective practice

The rationale for the inclusion of this area of professional learning seems to have developed from Furlong's (2015) report stating the need for teachers to 'work collaboratively with other teachers and other professionals' (p. 6) and is further justified by the McKinsey & Co (2010) report *How the world's most improved school systems keep getting better*. This report is quoted in the booklet but not referenced in the bibliography. It is referenced fully in the bibliography for this report. This is a thorough evaluation of educational systems which draws evidence from multiple countries (20), international assessment systems [TIMSS, PISA, PIRLS, NAEP] and subject areas. The data gathered ranges in date from 1983 to 2009 and allows countries to be placed into either 'sustained improvers' or promising starters' categories. The quote on p. 3 of the module booklet refers to the dissemination of a collective belief and shared understanding of ethos. Although not inappropriate, perhaps a more succinct explanation of McKinsey & Co's (2010) message would be: 'By developing a shared concept of what good practice looks like, and basing it on a factbased (sic) inquiry into what works best to help students learn, teachers hold each other accountable to adhering to those accepted practices.' (McKinsey, 2010, p.75). This is, nevertheless, a strong collation of research evidence which supports the collaborative practice which is valued as part of a drive towards improving standards of teaching and learning.

References – reliability

	Pre-2000	Post-2000
Peer reviewed		4
Gray material		6
Books		4
Other (websites)		3

17 publications (including further reading) are listed. One source was cited but not listed. One source was inaccessible.

All of the sources cited are from post-2000 publications, which reflects the increased interest in this area of research. Some articles need accurate referencing. The majority of the supporting evidence for the benefits of collaboration is not sourced from peer-reviewed literature though the majority of texts are from reputable sources.

Whilst the research supports the assertion that collaboration can be beneficial when done effectively, there are also associated challenges (i.e. inefficient systems, procedures and communication, conflicts of interest, lack of engagement etc.) which are only briefly mentioned. Remarks regarding cultural differences between organisations, and advice on tackling these are not clearly articulated.

Content - validity

The Fullan report (2011) referred to, '*Choosing the wrong drivers for whole system reform*', is incorrectly referenced in the module booklet and the relevance of the reference to communication skills (Fullan, 2011, p.3) is not clearly articulated. A more relevant expression of his findings might be: "focused collaborative practices mobilise and customise knowledge in the system, enabling teachers to know what other teachers do and to learn from them" (ibid, p.12). This better encapsulates the aim of collaborative working and places it firmly in the context of those drivers which are seen to have more impact in improving systems. Fullan (2011) indicates that top down pressure for reform will not yield the outcomes desired and that intrinsic motivation (buy-in) is required. (p.13). This argument can now be updated to include a more recent publication '*The Elusive Nature of whole system improvement in education*' in which Fullan (2016) further argues that "the strategy is to establish cultures that enable connection—such as **use the group to change the group**" (ibid, p.544). The module booklet emphasises the potential for collaborative activities to improve pupils' achievement which is supported by Fullan's report (2011).

In examining the learner benefits of collaboration the booklet guides readers to a NFER report by McCrone et al. (2009). This report is not included in the module booklet reference list but was found to be '*Collaborative good practice between local authorities and the further education sector*' (referenced below). It is worth noting that the outcomes stated in this report are based on a restricted sample of areas which were 'only included where **both** LAs and colleges were achieving well" (p.1 – sample). The report focuses on the outcomes from 9 case studies but 'only in cases where there was evidence of high achievement from LA and FE viewpoints [...] **and** a reported working relationship, was a visit booked to explore further the extent to which there was good practice which was perceived to positively impact on young people.' (ibid, pp 1&2). Such a skewed sample cannot be representative of the sector or of

collaborative practice within it. It is also difficult to assess the impact of an intervention when existing strong links between organisations might have impacts other than those being evaluated.

The Perkins-Gough/Metlife (2010) survey referred to on page 5 is used to support the statement that collaborative working should 'make your job more enjoyable' (WG,2016, p.5) The data, collected in the US in 2009, was drawn from a 15 minute telephone interview with 1003 current teachers or teachers who had left the profession within the preceding 12 months. The selected teachers were able to key in responses via a telephone keypad. This limits the range of questions that can be asked to those where a yes/no answer or numerical rating can be indicated. Limited follow-up was completed by only 28 respondents and this was completed online (not face-to-face). The 28 respondents selected were paid to take part (\$150 each). The methodology for collecting this data is flawed due to the limitations on the nature of the responses the system was designed to accept, and as such, the results should be viewed with caution. In addition, there is no information regarding the status of the teachers interviewed who had recently left the profession (retired, made redundant, employed on temporary contracts etc.) which may have influenced their responses. Moreover, it should be noted that Metlife (for whom the research was carried out) is a provider of financial services making educational grant allocations which may also have influenced responses. If this report is to be used it would be better to focus on statements such as: 'collaboration can help teachers and schools balance strengths and weaknesses and share different qualities of experience both inside and beyond the classroom to address more effectively varied student needs.' (Perkins-Gough, 2010, p.49), as this can be further supported by evidence taken from other sources (e.g. Leana, 2011).

The research carried out by Leana (2009) and reported on page 7 needs further explanation and evaluation. In particular, the term 'teacher social capital' needs to be clarified as it is not always expressed in the same way. Fullan (2011), for example, refers to this as 'professional capital'. Leana's original article was published in a 2009 edition of the *Academy of Management Journal* and argues strongly for the contextualisation of 'social capital' stating 'frequent conversations about work between employees who are not close are likely to be guarded and, whenever possible, superficial. At the same time, infrequent conversations, even among co-workers who feel close to one another, are not likely to have much effect on performance' (Pil and Leana, 2009, p1110). It also indicates an indirect link between professional learning and student outcomes as authors researching social/professional capital note the relationship as being between professional learning and teacher well-being rather than directly linking professional learning to grade improvements. Also worth noting are the conclusions of Leana's research, namely that: 'Building social capital in schools is not easy or inexpensive. It requires time and typically the infusion of additional teaching staff into the school.' (2011, p.35) The report also sounds a note of caution remarking that 'less-able teachers appeared to benefit most from network density' (Leana, 2009, p.1117) but also acknowledging that 'a potential drawback of strong group ties is that a group may become too insular and not receptive to external information or ideas' (Hansen, Mors, & Lovas, 2005 as cited in Pil and Leana, 2009, p.1116).

The Inter-Agency Network for Education in Emergencies 2015 report referred to on page 8 is not referenced in the module booklet bibliography and could not be sourced with the information available.

The Coe et al (2014) report referred to on page 10 is not referenced in the module booklet bibliography but would seem to be *'What makes great teaching?: Review of the underpinning research'*, a Sutton Trust report collating a wide range of peer reviewed and scholarly publications and including some primary research documented in the annexes provided. The Sutton Trust is a well-established and well-respected charitable organisation with an established record of commissioning research which informs and drives policy in the UK and as such is a strong source.

The Education World (2015) article referred to on page 10 is a non-peer reviewed piece on a commercial website which provides information and teaching materials free to the user. The sources quoted in the text are sector relevant but for the most part, not academic or taken from academic sources. The various types of collective observation are accurately recorded but the possible negative aspects of collective observation are not reported. For example, the article reports that observation should not be used as a performance management tool. It also notes that inexperienced teachers benefit most from the activity but that struggling teachers may find it demoralising, which correlates closely to Leana's (2009) findings.

Pages 11-17 of the module booklet deal specifically with establishing Professional Learning Communities and convey The Welsh Government's vision for this. It relies largely on Welsh Government documentation and publications already examined, with the exception of West-Burnham's 2014 seminar which is referred to on page 13. However, the link provided to this publication is not active and the publication could not be sourced through other means.

3.2 Reflective Practice

Rationale for module – evidence of effective practice

As is indicated in the module booklet, reflective practice is not a new concept indeed its relevance to educational practice has been discussed since the 1930s. Moreover it has been widely used in training for nursing staff since the 1990s and is described as 'a learning and development process that includes the self-examination of one's professional practice, including experiences, thoughts, emotions, actions and knowledge that enrich it' (Dubé and Ducharme, 2015). This module aims to develop a greater degree of reflective practice amongst teachers so that they may enhance their ability to adapt teaching to the needs of individual pupils and/or groups of pupils. Although not directly the focus on differentiation identified as in need of attention by OECD, reflective practice is nevertheless linked to this outcome as it allows teachers to reflect on their practice and try new things to engage learners. This module also links to action research which is covered in Effective use of Data and Research Evidence.

The module has a clear focus on the benefits of reflection and only one dissenting voice (Hayes, 2007, p.4) is cited, though others have also questioned its validity. Thompson and Pascal (2012) for example state that reflective practice has 'common tendency [for it] to be oversimplified in practice'. This may be the result of the numerous models of reflective practice which exist. Finlay (2008) notes that 'One of the consequences of the lack of consensus and clarity about the concept of reflective practice is the proliferation of different versions and models to operationalise reflective practice'. A number of these 'different versions' are outlined in the booklet thus acknowledging that numerous models of reflective practice exist, but no guidance as to which model teachers should follow is offered. This may not be an issue if the

training facilitator is well-versed in reflective practice and able to guide training participants, but it may be more problematic for novice or inexperienced facilitators or individuals accessing the materials online. A critical evaluation of which model might be best suited in a range of problem solving situations would be of use, perhaps supplemented by the presentation of case studies so that the teacher can decide for him/herself.

There are also potential difficulties not acknowledged in the text. For example on page 4, it is stated that ‘Critical reflection [...] involves evaluating practice and making the case for change based on solid evidence.’(my italics). Personal reflection cannot be described as solid evidence as it is, by definition, subjective. It is open to interpretation and is coloured by personal beliefs and values. In a lesson observation situation, the success (or otherwise) of the same action may be perceived differently by the teacher and the observer. Care must be taken, then, to acknowledge the individual nature of reflective activity and to clarify that the ‘solid evidence’ will come from external sources to which the teacher may turn for inspiration.

References – reliability

	Pre-2000	Post-2000
Peer reviewed	6	7
Gray material		5
Books	8	14
Other (websites)		1

The publications listed are from reputable sources with the exception of the Atherton text [Reflection; an idea whose time is past?] which is an online blog and personal opinion piece.

Content - validity

The information booklet offers a comprehensive overview of a number of different models of reflective practice from the basic ‘What, So What, Now what’ model to more complex models which advocate evaluation and constant revision of actions taken. There is a slight bias in focus towards the simpler, three point models and this should be rectified going forward to better fit with the aims of classroom based action research and to further enhance differentiation for which there is no ‘one size fits all’ solution.

As with the other training modules, the evidence cited is overwhelmingly in favour of reflective practice. To ensure that a balanced argument is presented however, any training materials being used should note that such practice may not always be appropriate. Moore and Ash (2002) for example, argue that beginner teachers in particular may overthink negative experiences and ‘that if left unsupported such thinking can all too easily be(come) negative, destructive or perfunctory’. Sellers (2013) also identifies a number of issues, particularly relating to inexperienced teachers, which merit consideration. She highlights the following:

- Who decides what ought to be done and whose belief systems and values are being promoted, supported or actioned in this decision?
- There are a number of societal and ideological restraints associated with educational workplaces that mean that these contexts do not readily accommodate the desired action, irrespective of how it may facilitate improvement in the teaching and learning process.

- A third concern focuses on the skills and capacities of the individuals engaged in the reflective cycle to actually execute the action in the event that a consensually agreed action could be determined. (Sellers, 2013, p.11)

It is also worth noting a worrying development in the use of reflective journals. In a case reported in the British Medical Journal in 2016 [*Written reflection is dead in the water*], a student nurse was ordered by the courts to submit a reflective portfolio as evidence in a negligence case that was being tried. The request prompted the publication of a joint statement from Professors Sheona McLeod and Carrie MacEwen at the Conference of Post-Graduate Medical Deans for Health Education England (HEE) in February 2018 where they stated the need to ‘provide clear guidance for doctors in training, and those who support their education and training, on how to evidence their professional approach to learning’ .Is it possible that student teachers could also become reluctant to record instances where they feel their practice (or that of others) has fallen short for fear of reprisals?

Hart and Cooper (2015) support that view, arguing that ‘the essential reason for praxis (reflective practice) as conceived by Aristotle has been, albeit unwittingly, hijacked and distorted by tutors and assessors so that in many cases the potential ‘fruits’ of the process and product of genuine student reflective practice are often translated into invented accounts that exist to satisfy the demands of internal and external parties who are superordinates by virtue of their professional status.’ (Hart and Cooper, 2015, p.15) The case cited in the British Medical Journal would certainly offer some justification for logging reflective experiences that are ‘more acceptable’ for external scrutiny but these may not necessarily produce the quality of reflection desired.

3.3 Effective use of Data and Research Evidence

Rationale for module – evidence of effective practice

This booklet is very informative as a “How to ” module, though there are some shortcomings in the content (see below). It is the longest of the four module booklets at 38 pages and has no additional supporting materials provided.

The rationale for the inclusion of ‘data and research’ as part of the professional learning offer is articulated in Section 4, ‘Why does research matter’ and would have more impact if it appeared earlier.

Sections 5 focuses on school data and readers are directed to Learning Wales information self-evaluation packs. These are useful but the structure is such that the Overview of data collection points and the rationale behind the data being collected is found in Section D with Section E explaining how to interpret the data. If these materials are being used as part of a structured training event, this may not be an issue as facilitators will have the opportunity to familiarise themselves with the material in advance of the session. However, teachers accessing the data independently may be put off by the presentation of the data and not look far enough into the list to find D and E which provide helpful guidance and are good starting points.

The text guides users to a number of reliable organisations (for example BERA and CUREE) and the information regarding the need to interpret resources is useful.

References – reliability

	Pre-2000	Post-2000
Peer reviewed		2
Gray material		10
Books	1	13
Other (websites)		2

None of the in-text citations are from peer reviewed articles, though two peer reviewed articles appear in the 'further reading' list. Given the number of scholarly articles on educational research, the lack of peer reviewed evidence is marked.

One web-based source is an industry sponsored paper (IDC iView) supporting the collection and use of big data, but this is to be expected as the company develops software for data analysis.

A further 9 websites are suggested as sources of information but not referred to directly.

The Educational Endowment Foundation is one of the key sources quoted. The Teaching and Learning Toolkit does provide a useful breakdown of whether research findings are valid and reliable and indicates the cost/outcome implications. It is a good starting point for those new to research and provides a basis for evaluating educational research. As such it merits greater development in the booklet. The 'Point for Reflection (p.9) is probably aimed at this but there is no provision for feedback for individuals accessing the materials independently.

Hutchings' evaluation of the City Challenge Programme (2010) is cited as evidence of the benefits of 'forensic use of data' underpinning successful school leadership. However, the report also states 'Key elements generally included support with effective use of data, teaching and learning and leadership, and often funding for additional staff or resources' (p.vii, Executive summary). The funding and staffing needs are not reported in the booklet.

The advice given on page 10 pertaining to fallibility of research data is good but could be made clearer to those new to data evaluation. Confident training facilitators would no doubt be able to supplement their sessions with such examples but it might be useful to include some 'possible scenarios' for evaluation in the booklet itself.

Content - validity

The guidance is largely drawn from the interpretation of findings from reputable sources. However, as with the other modules, this is a very one-sided argument and there are shortcomings which should be addressed.

There are some very mixed messages in the text. For example, the explanation of the fact that data is the plural of datum suggests that the intended audience is one of complete novices in educational research. However, there is no discussion of how to evaluate the research that users may find which suggests that an experienced facilitator will be on-hand to advise or that users will already have some experience of educational research. For example the case study presented on page 4 may seem to show impact but could be developed to indicate the deeper research and scrutiny of methodology and samples required to allow prospective

teacher- researchers to assess its potential for reproduction in their own teaching environment. As Goldacre (2013) states, 'we need to think carefully about whether the people in a trial of an intervention are the same as the people we are thinking of using the intervention on.' (Goldacre, 2013 as cited in the booklet). Sample questions could be included to assist newcomers to the field: for example 'What was the profile of the 59 participating schools?', 'does it fit with the profile of my school?' The documentation should make clear that what has worked for someone else's pupils may not be appropriate for the user's pupils. The aim of research evidence is to inform but this needs to be supplemented by the professional experience of the teacher and their understanding of the pupils in their school

Page 31 refers to the identification of limitations in the research used. Again, it would have been useful to provide prospective teacher-researchers with some questions to help them identify what the limitations might be;

- Sample size
- If students were peer-nominated, how was this done? Is this the best way to do it?
- Cultural profile
- No. of eFSM (eligible for free school meals) in the sample
- Outcomes of other interventions (is 10% good compared to other findings?)

Understanding the limitations of research is an important skill as it helps researchers identify gaps in the data and define future areas for research.

If further guidance is produced for this module, and outcomes established, they should focus on making the teacher more research aware and better able to evaluate the usefulness of techniques that may have been used successfully elsewhere.

3.4 Coaching and Mentoring

Rationale for module – evidence of effective practice

The rationale for this module links mostly closely to Furlong's (2015) recommendation that teachers "Are willing to work collaboratively with other teachers and other professionals" (Furlong, 2015, p.6) although it could also link to his stated recommendation that teachers should 'Take personal and collective responsibility for professional development' (ibid, p.6) though neither Furlong (2015) nor OECD (2014) overtly refer to coaching and mentoring as a means to improve classroom practice or, by extension, pupil outcomes. This perhaps explains why the literature to which this module most frequently refers is more heavily weighted towards 'grey material' than other modules.

Although this is an established field of research in educational practice, the two key (external) sources of information are the study by Lord et al. (2008) and the CUREE model for coaching and mentoring (2014). Lord et al's (2008) research is based on full review of 13 studies, an audit of evidence from 43 sources, evidence of promotion of mentoring and coaching on 30 Local Authority websites, and a 'Teacher's Voice' survey. The key message which emerges from this review is that coaching offers benefits for all involved, coach and coachee. There are nevertheless, a number of challenges to implementation identified and whilst these are acknowledged, and recommended for consideration during the planning stage, they are not elaborated upon. It should be noted, however, that this is the only one of the four modules

which specifically includes notes for consideration when planning professional development for individuals or groups. This module, however, is also the only one to acknowledge the challenges and the time implications of the activity (p.4) and to offer the caveat that success will only ensue if the activity is “done well”.

References – reliability

	Pre-2000	Post-2000
Peer reviewed	0	0
Gray material		13
Books	1	
Other (websites)		4

The primary source of information is variably referred to as ‘an NFER study’ and ‘Lord et al (2008)’ which gives the impression that two sources have been used where in fact it is only one.

This booklet is very limited in its range of source material, relying almost exclusively on the NFER and CUREE sources already mentioned. Many of the ‘gray’ sources identified provide case study material.

Jo Lindon’s (2011) work on coaching triads produced for the National College is referred to on P.5 but is not referenced. However, the publication would seem to be ‘*Creating a culture of coaching: upskilling the school workforce in times of change*’ (2011) now fully referenced below. Whilst this work is not peer reviewed, it is sector-led and could be used to illustrate the way coaching can be introduced in schools. Coaching triads are not the primary focus of the paper which reports the results of Lindon’s research using a small sample of 8 schools in a limited geographical area aiming to establish a culture of coaching within their schools. Lindon (2011) concludes that ‘coaching can be seen as a way of streamlining costs for schools, as it offers a cost-effective, internal and personalised approach to professional development, rather than more costly, externally provided CPD, with its limitations of lack of tailored personal focus and potential mismatch to individual skills and needs.’ (Lindon, 2011, p.19). She also note issues around timetabling meetings and the negative perception in some staff that coaching was an unwarranted ‘deficit model’. These issues merit deeper discussion, particularly around the purpose and intended outcome of coaching for staff.

Case Study 3 presented on page 12 of the module booklet requires a greater focus on the coaching element of the Achievement for All Cymru initiative. It is not clear, for example, who took part in which coaching sessions, how many sessions they benefited from, whether the coach was appointed from within the school or was external to it and whether the coach had received any specific training beforehand and the cost implications for the answers to those questions. This level of information would be useful to schools interested in developing a coaching culture in their establishments independently of initiatives funded through the Pupil Deprivation Grant, renamed Pupil Development Grant in March 2018. The Case Study talks about positive outcomes for learners in reading, writing and mathematics, but it is unclear how (or whether) this can be directly related to the work of the ‘achievement coach’ involved in the programme.

If these materials are to be revised in the light of the review of the professional learning model, the recently established and peer reviewed International Journal of Mentoring and Coaching in Education is dedicated to this subject area and could be a useful source. However, this is a developing field of research and a considerable number of peer-reviewed sources can be found in more generalist educational research journals.

Content - validity

The study by Lord et al. (2008) is a strong text which draws on a number of sources to review coaching and mentoring. However, the challenges outlined in the paper while mentioned in the booklet are not considered in detail. They include:

- Time and workload pressures
- Recruitment and allocation of mentors/coaches, having a clear focus and understanding of mentoring/coaching, and organisational culture and strategic planning.
- Providing training for mentors/coaches
- Establishing quality assurance and monitoring systems
- Gaining the commitment of the workforce
- The profile of the workforce and the workplace
- Establishing the role and mitigating potential conflict between adviser and assessor roles (2008 p.v & vi)

This is unfortunate as those looking to develop coaching in their schools need to be fully aware of the potential pitfalls so that they can investigate ways to mitigate negative impacts.

The emphasis in the booklet is placed on outcomes for staff; it is unclear however how this in turn can positively influence pupils' outcomes. Nevertheless, as a vehicle for encouraging teachers to examine their practice and think creatively about how they might add to or adapt their practice, coaching and mentoring would seem to offer structures and frameworks to support development.

4. Unstated assumptions

The clear assumption in relation to the subject focus of the four 'modules' is that these approaches work. However, Goldacre (2013) sounds a note of caution, noting that what has worked for someone else in their classroom will not necessarily work for the participating teacher in theirs if the need of their pupils or their school culture differs significantly from that which was tested. A number of issues around poor resourcing, the potential for disillusionment of teachers who think they are being singled out as 'failing' and cultural differences within and across schools are highlighted in the literature (see Lord et al, 2008) but are not fully developed in the booklet. Potential users of these materials should be informed of the issues relating to implementation so that they can take positive steps to ensure that the training they provide allows for discussion of possible solutions which allow for contextual variations and are, therefore, more likely to achieve the outcomes desired.

5. Barriers to implementation

There is no clear indication of the audience for these booklets. Although the Iteration 1 guidance states that they are designed for training facilitators' use, this is not evident in the booklet introduction. Indeed, the inclusion of aspects for reflection would suggest that they are intended for individual use, perhaps within the context of a course of training. As they are freely available through the Learning Wales website, it may be expected that motivated individual teachers may access the materials but then be left frustrated at the seeming lack of support to complete the tasks contained within the modules.

There are no stated aims or learning outcomes for the modules presented in the booklet and it was not possible to ascertain whether these had been independently developed and incorporated into training sessions.

The need to ensure that sufficient time is made available to participants is a recurring theme throughout much of the research referred to [Pil and Leana (2009), McCrone et al (2009), Harris and Jones (2011)]. This is, however, only reflected in one of the current modules – Effective Collaboration - and is offered as guidance for consideration rather than a key element. The new model specifically alludes to the 'allocation of time' and this must be integral to any future training activities. Proposed training packages should clearly indicate how much time should be devoted to both the development stage and the activity itself going forward.

There is very little information on how the four 'modules' relate to one another and could facilitate/enhance one another, with the exception of a link drawn between mentoring and coaching and group work and reflective practice.

There is no differentiation in the modules to allow for greater or lesser classroom experience, level of prior qualifications, current role, school environment etc. Any training development using the new National Approach to Professional Learning as a framework should take into account background variables such as: gender, experience, school sector, school level, school support or school size. (Ingvarson et al.,2005). As a greater degree of differentiation is one of the OECD's (2014, 2017) recommendations, the sector should look to lead by example and develop suitably differentiated provision for teachers.

Trainers themselves must have a sufficient level of competence in the subject areas to deliver training effectively.

6. Links to the new National Professional Learning Model

The proposed National Approach to Professional Learning consists of 8 interconnected elements designed to guide providers of professional learning activities and individuals proactively seeking to investigate their practice towards an understanding of the most effective ways to improve and evidence impact. The existing modules that are the subject of this review form part of the 'Pedagogy for Professional Learning' section of the new model.

The proposed new National Approach to Professional Learning acknowledges many of the issues that affect the current stand-alone modules and offers a coherent framework that encourages a greater consideration of the various factors that impact on successful outcomes. A positive development in the creation of the new model is the link to the new Professional Standards. These were not in place when the original documents were created but could now be embedded throughout. This will give purpose to the modules of study. The Professional learning Passport should be the repository for reflection on the activities incorporated into the

various modules. This would then enable teachers themselves to revisit their ‘thoughts’ as their reflective practice evolves.

The proposed new National Approach to Professional Learning also offers the opportunity to link the training content of the existing modules to the implementation of the new curriculum model by clearly stating that the various sections are designed to enable teachers to develop the skills required to deliver a subject integrated /thematic curriculum.

Links to Impact and Evidence could be problematic for the four module areas under consideration as the research suggests that direct links cannot be made. Moreover, there does not currently seem to be any framework for evaluation of impact on staff or pupils. Exam performance is often cited as evidence of improved teacher practice, indeed, it is almost the sole ‘formal’ assessment of teacher effectiveness but there are any number of factors which contribute to student outcomes: a new teacher, a new curriculum focus, impending exams, discovery of a career path that requires a certain subject focus, improved home situation etc. The number of variables makes drawing a causal link between the two unreliable. The research underpinning the Effective Collaboration module in particular focuses on the impact on teacher satisfaction rather than pupil outcomes and the complexity of such a measure is mentioned in all module research

The research reviewed suggests that it is the least experienced teachers that benefit most from training. They must, therefore, be given opportunities to learn from their more experienced colleagues not only on their own school but within families of schools and beyond. However, experienced colleagues must also be challenged otherwise they will become disillusioned if training activities are always perceived as benefiting others and not themselves. The new National Approach to Professional Learning should therefore encourage differentiated provision which reflects the needs of beginner and more experienced staff.

7. Conclusion

The comprehensive educational changes taking place in Wales mean that professional learning must now be conceived differently; it must be flexible and have a more direct focus on the needs of all learners and teachers in Wales today. It must be focused on direct provision of information and demonstration of ‘good practice’ through the creative use of in-service days, online and blended training or organised external training provision, and it needs to reflect the skill set required of a teaching workforce adapting to curriculum change and newly emerging skill priorities.

The existing New Deal modules are well conceived and seek to meet those emerging needs. There is an opportunity now to ensure that the evidence base used to inform the content of the booklets is refreshed to include not only more recent publications but also those which demonstrate the most robust research methods. The proposed new National Approach to Professional Learning builds on the early work reflected in the four booklets and is better aligned to the development of training which takes into account the recommendations made by external agencies and The Welsh Government’s vision for education in Wales. OECD made a clear recommendation that Wales needs to better communicate how reform initiatives fit together (OECD, 2017. p 31) and the new National Approach to Professional Learning offers the opportunity to demonstrate strongly that a more coherent approach has been embraced in full.

Nevertheless, as the development of training materials goes forward, there are some issues which still need to be addressed. The current modules do not have clear objectives or clear guidance for use, nor are they differentiated to reflect the differing levels of experience of participating staff. There is currently no evaluation tool to allow for monitoring, and revision if necessary, of the module content. The need for such evaluation is advocated by the Department for Education who stated in 2013, that 'We [...] need to understand whether the policy reforms that we are making are delivering real improvements in practice' (DfE 2013) This is further supported by Muijs and Lyndsey who argue that 'When a CPD programme is directly intended to change practice, it is essential to evaluate whether participants are actually using the new knowledge and skills acquired' (Muijs and Lyndsey 2008). A further key element to success of any professional learning model would seem to be not only in the quality but in the duration of the training which Muijs and Reynolds suggest should take place over a minimum of 2 terms. (Muijs and Reynolds, 2018 p.282). Wales has an opportunity to be a sector leader in its contribution to research through the evaluation of its National Approach to Professional Learning, if the correct mechanisms are introduced from the outset and examined over a period of time.

So, with particular regard to the modules that have been reviewed, Barlow, et al (2014) cite Desimone's '5 key components of content focus, active learning, collective participation, duration and coherence' as being essential to create the link between input (professional learning) and output (pupil results). The existing stand-alone modules have the content focus, the active learning and collective participation required. The proposed new National Approach to Professional Learning will bring greater coherence to the professional learning landscape in Wales thus strengthening the potential for impact on practice.

The underpinning rationale for the new National Approach to Professional Learning is to show Impact and evidence: It has been argued that it is extremely difficult to establish a link between teacher action and pupil outcome (Hayes and Chang 2012). Nevertheless, as the findings of the Area 1 report indicate, a measure of the impact of professional learning on the teacher *can* be achieved, and one may extrapolate from that the impact that might be felt in the classroom. So whilst there may be too many variables to be able to state definitively that any specific aspect of professional learning has brought about the effect observed, what can be stated with some confidence, is that the more new skills are brought into play, and the more evidence we collect and disseminate about where and how they have had an impact, the better prepared those who benefit from training will be to adapt their practice to maximise the impact on pupils in their own classrooms.

7.1 Recommendations

- Develop clear objectives for each module

- Ensure all underpinning research is relevant, appropriate, contemporary and valid
- Map existing and future materials to the Professional Standards for Teaching and Leadership
- State clearly on the Learning Wales website that these modules are intended as support materials for training providers
- Use PLP as a platform for logging engagement
- Differentiate the learning materials to reflect the level of experience of participating teachers
- Develop evaluation tools for monitoring the impact of the training materials and consider undertaking longitudinal evaluation
- Highlight the allocation of time necessary for activities
- Rethink the use of INSET days and consider a thematic focus
- Develop 2 further modules for Assessment for Learning and Differentiation.

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