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# UNDERTAKING PROFESSIONAL ENQUIRY

## An Introduction for Lead Enquirers

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## 1. INTRODUCTION

### 'Professional Enquiry'?

- 1.1 Encouraging teachers to undertake research and enquiry has a long history. It was first promoted in the 1970s by Lawrence Stenhouse who argued that when teachers engaged in curriculum development, they were in effect researching their own practice (Stenhouse, 1975).
- 1.2 Over time a range of labels has been used to describe teacher research and enquiry including 'reflective practice' (Schon, 1983), 'action research' (Elliot, 1991), 'practitioner research' (Zeichner and Noffke, 2001), 'collaborative inquiry' (Bray, 2000), 'critical enquiry' (Aaron et al, 2006), 'teacher research' (Cochran-Smith and Lytle, 1993 and 1999; MacLean and Mohr, 1999) and 'critical collaborative enquiry' (Drew, Priestley and Michael, 2016).
- 1.3 The approach adopted by Marilyn Cochran-Smith has become very influential. She argues that teachers should develop 'inquiry as stance': in other words, this should become an essential part of their professional practice that enables them to have 'agency' within the education system. She views this as:  
  
"... neither a top-down nor a bottom-up theory of action, but an organic and democratic one that positions practitioners' knowledge, practitioners and their interactions with students and other stakeholders at the centre of educational transformation" (Cochran-Smith and Lytle, 2009:123-124).
- 1.4 Under these various guises what we have decided in Wales to call 'professional enquiry' has become an established element of both professional practice and the study of education within Universities in the UK (Furlong, 2013). The General Teaching Council for Scotland promote the following definition of professional enquiry:  
  
" A 'finding out' or an investigation with a rationale and approach that can be explained or defended. The findings can then be shared so it becomes more than reflection or personal enquiry".

## Professional Enquiry in Wales

- 1.5 It could be argued that for some time in Wales, the professional practice which teachers use in the classroom has largely been decided for them by other parts of the education system: what we are currently referring to as the other two tiers of the three tiers within the education system<sup>1</sup>. It is of course sensible that teachers should ensure that their practice is 'evidence informed' through drawing upon research and inspection evidence and the way that this is presented to them by central and local government. It could be argued, however, that teachers have become too dependent on receiving information and advice 'from above' and have not had sufficient opportunity to undertake their own enquiries, so that their professional knowledge is informed not only by evidence drawn from elsewhere, but also through being applied and tested in their own classrooms and schools. There is strong evidence to suggest that teachers, like other professionals, find this one of the most effective forms of professional development (Gilchrist, 2018).
- 1.6 For these reasons, professional enquiry has now been firmly adopted by the Welsh Government and the Regional Education Consortia as a key element within the new *National Approach to Professional Learning*<sup>2</sup> and the emerging *National Strategy for Research and Enquiry*. It is a feature within the *Schools as Learning Organisations* project and through the work of the Professional Learning Pioneers is being used within the development of the new curriculum. Hopefully it will also become an element within the new Estyn Self- Evaluation and Improvement approach to school inspections and wider system accountability.
- 1.7 Following a pilot programme in 2018-2019 and a report drawn up by the three Universities working with the professional learning pioneers<sup>3</sup>, in 2019-2020 the pioneers will undertake further work to develop their skills and experience to become *Lead Enquirers*. The intention is that in future years they will play a leading role within a national programme of professional enquiry that will involve ever greater numbers of teachers. Thereby professional enquiry will become an established part of professional practice in Wales and a key enabler of the new school curriculum and other aspects of educational policy.

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<sup>1</sup> Welsh Government (2017). *Education in Wales: Our National Mission*. Cardiff: Welsh Government.

<sup>2</sup> Welsh Government (2018). *The National Approach to Professional Learning*. Cardiff: Welsh Government.

<sup>3</sup> Egan, D., Evans, G. and Hughes, C. (2019). *Developing Teacher Professional Enquiry in Wales*.

## Why Professional Enquiry?

1.8 The advantages of teachers undertaking professional enquiry are:

- It enables teachers and schools to examine new educational ideas and developments in their own situations.
- It allows all members of the school community- leaders, teachers, support staff, learners, parents and guardians and the wider community- to be involved and to have a say.
- It should be collaborative, allowing teachers and others to work together to identify challenges and how best to overcome them.
- It should be an ongoing process rather than a time prescribed consultation or review.
- It builds upon the existing knowledge, skills and experience of teachers and other colleagues.
- It should allow teachers to critique their current practice and investigate new approaches that will have to be adopted in future.
- It allows teachers to develop their professional knowledge and thereby to become more effective practitioners in future.

## 2. OUTLINING THE ROLE OF THEORY IN PROFESSIONAL ENQUIRIES

Theory has an intricate and exciting role to play within the undertaking of professional enquiries. In beginning to work with and through theory, it is useful to outline what it is, what it isn't and what it could be.

In essence, theories are like kaleidoscopes; lenses from where we can make sense of the world around us. Bourdieu and Wacquant (1992) illustrate theories as polymorphic tools that, following the thoughts of Ball (2006, p.3) 'do not tell us how to think, but enable me to think about how I think'. As a consequence, theory plays a vital role in providing practitioner enquirers with the ability to generate questions, makes sense of data and enables the transformation of evidence into practice.

Another key point is to acknowledge the multitude of theories available to educators. Different theories will play different roles. For example, in some of our school based work we have used socio-cultural theories to make sense of teachers and young people's experience within education. Equally, some of our interests have necessitated an orientation towards psychological theories that can help us understand and evaluate the behaviours and cognitive processes underlying learning. There are so many theoretical lenses available that it is beyond this small introduction to list them all.

Related to this is highlighting what theory shouldn't be. It is at times thought of as something quite elusive, abstract with little applicability to practice in the classroom. If used badly or not taught well, the use of theory can create what Ball (2006, p.1) terms a 'perceptual straightjacket' that can inhibit thinking and stifle practice. Consequently, theory, if not discussed, can be quite daunting. We fully acknowledge and have experienced the challenges of using theory. Yet, whilst these challenges exist they should not preclude the avoidance of engaging with theory.

We hope that through our work and discussions we will together overcome some of these challenges around theory and help to begin your use of theory in the positive ways suggested above. The possibilities of theory outweigh the challenges. Sensitively engaging with theory will only enhance your enquiries; helping you constructively and critically make sense of the world around you.

### 3. ENQUIRY METHODS: OVERVIEW

A range of methods can be used to undertake professional enquiries. These are set out below and future sections look at these in greater depth.

Enquiry Method	Advantage	Disadvantage
Questionnaires	<ul style="list-style-type: none"> <li>• Potential to reach large audience quickly, e.g. via group e-mail or online questionnaire websites.</li> <li>• Low cost if completed online.</li> <li>• Pre-coded questions elicit standardised answers which are easier to analyse.</li> </ul>	<ul style="list-style-type: none"> <li>• Return rates may be low.</li> <li>• Questionnaires can be incomplete.</li> <li>• No guarantee that the correct person is answering the questions.</li> <li>• Difficult to validate truthfulness of answers.</li> </ul>
Surveys	<ul style="list-style-type: none"> <li>• Clear focus on empirical data based on real-world observations.</li> <li>• Can generate large amounts of data fairly quickly.</li> <li>• Potential to appeal to a wide audience.</li> <li>• Can be easy to administer and complete, e.g. using online tools.</li> </ul>	<ul style="list-style-type: none"> <li>• Detail and depth is inevitably sacrificed for breadth.</li> <li>• Difficult for researchers to verify honesty or accuracy of responses.</li> </ul>
Literature Reviews	<ul style="list-style-type: none"> <li>• Provide background knowledge for the enquiry topic.</li> <li>• Finding out what is already known in this field of enquiry.</li> <li>• Avoiding duplication.</li> </ul> <p>May help to shape enquiry questions</p>	<ul style="list-style-type: none"> <li>• Studies found may not be relevant to the enquiry focus.</li> <li>• Where there are gaps in knowledge.</li> </ul> <p>Potential for over-influencing enquiry questions.</p>
Interviews/Focus Groups	<ul style="list-style-type: none"> <li>• In-depth information gleaned.</li> <li>• Highly flexible: conversation can be adjusted according to the responses.</li> <li>• High response rates when interviews are pre-arranged.</li> <li>• Interviewees can say if they are unsure or do not understand.</li> </ul>	<ul style="list-style-type: none"> <li>• ‘Interviewer effect’ means that data is based on what people say rather than what they do.</li> <li>• Interviews can be time-consuming and resource heavy, e.g. travelling, equipment.</li> <li>• Consistency and objectivity are difficult to achieve because context is so specific.</li> </ul>

	<ul style="list-style-type: none"> <li>• Personal nature means that respondents have a strong say.</li> <li>• Body language and other cues can be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• Some groups may be reluctant to be interviewed, e.g. Gypsy/Traveller children.</li> <li>• Danger of asking leading questions, e.g. 'Isn't it the case that ...?'</li> </ul>
Observations	<ul style="list-style-type: none"> <li>• Natural settings can afford a more realistic study.</li> <li>• Schedules can eliminate bias.</li> <li>• As participant observers, it's possible to see things from group's perspective.</li> <li>• Video recording observations can stimulate open discussion and reflection.</li> </ul>	<ul style="list-style-type: none"> <li>• As participant observers, it's difficult to take notes during observations.</li> <li>• As non-participant observers, more difficult to see things from the group's perspective.</li> <li>• The analysis of findings from the use of technologies, such as audio-visual recordings, is time-consuming.</li> </ul>
Case Studies	<ul style="list-style-type: none"> <li>• Provides in-depth information.</li> <li>• Captures intricacies of complex situations.</li> <li>• Draws upon multiple sources adding credibility.</li> </ul>	<ul style="list-style-type: none"> <li>• Difficult to generalise and may not be representative.</li> <li>• Practically difficult to negotiate access in some cases.</li> <li>• Individual memories are selective and may be inaccurate.</li> </ul>
Experiments (Including Randomised Control Trials)	<ul style="list-style-type: none"> <li>• As participant observers, it's difficult to take notes during observations.</li> <li>• As non-participant observers, more difficult to see things from the group's perspective.</li> <li>• The analysis of findings from the use of technologies, such as audio-visual recordings, is time-consuming.</li> </ul>	<ul style="list-style-type: none"> <li>• Ethical issues when using control and experimental groups. Questions as to whether the conditions in artificial settings such as laboratories can be replicated in the 'real world'.</li> </ul>

Based on Grigg, R. (2015). *Effective Use of Data and Research Evidence*. Cardiff: Welsh Government

## 4. DEVELOPING ENQUIRY QUESTIONS

4.1 Carefully planning your enquiry, your enquiry questions and the methodologies you are going to use are all important. The advice below is based on the series of very accessible publications that the NFER have produced on practitioner research and you will find more information there <https://www.nfer.ac.uk/how-to-guides-collection>

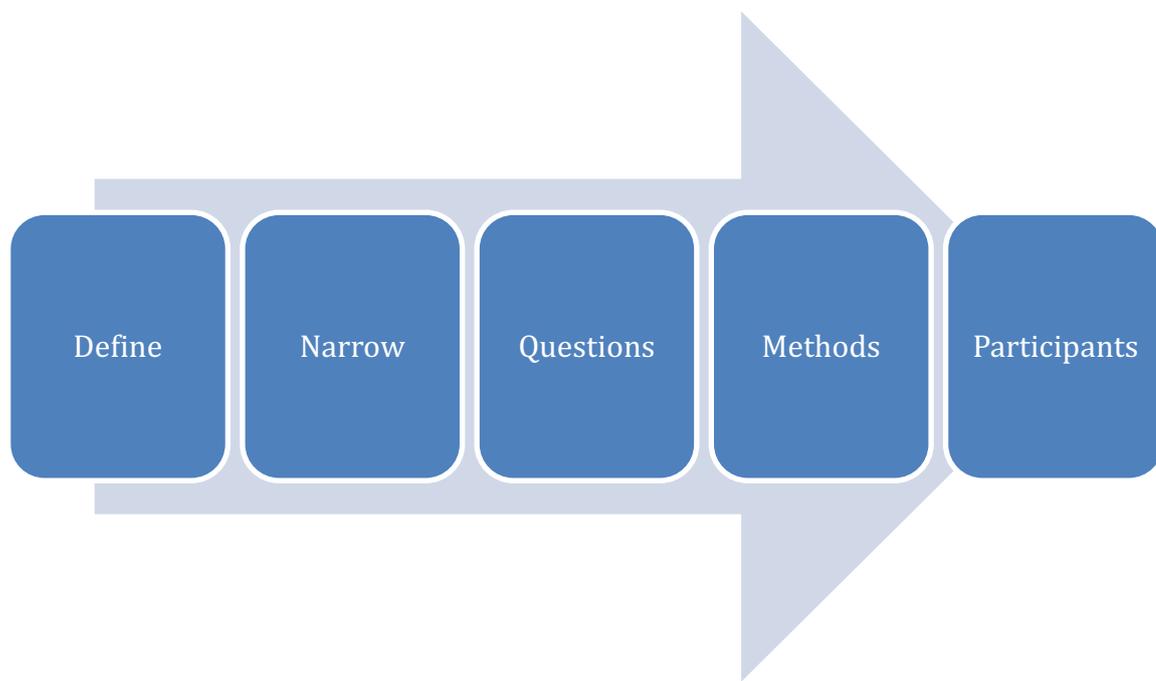


Figure 2: Steps to planning enquiries.

### Define an Area of Interest

4.2 Given the focus of our work this should relate to the new school curriculum in Wales, drawn from:

- One or more of the Areas of Learning and Experience
- A cross -curricular dimension
- The progression framework
- Learning and teaching pedagogy

4.3 It would make sense for this to be something you are interested in and which has emerged naturally from your classroom experience. The national menu of enquiry topics will provide you with further guidance on this.

## Narrowing the Focus of the Enquiry

- 4.4 It is always sensible to narrow down the area you are interested into a manageable focus for enquiry and/or to consider if you want to break the area up into sub-topics which you could explore over a series of enquiries.
- 4.5 For example, your area of interest might be how authentic learning can be developed within the Humanities AoLE (something which has been identified in the national menu). It might make sense to narrow this down to one of the WM statements within the context of your own phase and with a particular year group. If you then wanted to extend this work into future enquiries you could move to other WM statements, year groups and even cross-phase.
- 4.6 Your Cardiff Met contact will guide you through this process.

## Developing Your Enquiry Question (s)

- 4.7 Your enquiry questions should be clear, explicit and define the parameters of your work. There are usually three types of questions:
- **What** questions that address the effectiveness of a specific approach to pedagogy. An example might be: 'What were Year 8 pupil's perceptions of the benefits of authentic learning in addressing WM statement 1 in the Humanities AoLE?'
  - **How** questions that examine the use of specific pedagogies and the impact they have on learning. An example might be: 'How did the use of authentic learning influence Year 3 pupils understanding of WM statement 1 in the Humanities AoLE?'
  - **Why** questions that explore the causes or reasons for specific pedagogical outcomes. An example might be: 'Why did authentic learning when used to explore WM statement 1 in the Humanities AoLE lead to progression for some but not all Year 6 pupils' learnings?'

Based on Blake, N. (2010). *Designing Social Research*

## Choosing Your Enquiry Methods

- 4.8 Educational researchers often use a mixed methods approach that draws upon **quantitative** (numerical data that can be analysed by mathematically based methods) and **qualitative** (data derived from human

beings and their understanding of the world) evidence. Whilst you may wish to use numerical data, it is presumed here that most of your enquiry work will be undertaken using qualitative data.

4.9 The range of qualitative data which may be available to you has been set out in section 2 above and will be explored further in section 4 below. Choosing which of these methods you use will lead to your enquiry design.

4.10 The following should be considered in choosing your enquiry methods/design:

- *Your enquiry question(s)*. If you want to find out what pupils' perception were of authentic learning, it makes sense to use interviews and/ or focus groups. If you are trying to find out why some pupils progressed their learning more than others through using authentic learning, you would be well advised to use observations, case studies and interviews.
- *Your participants*. On-line surveys would be not well suited to carrying out enquiries with younger children, but might have greater value with older children, accompanied by focus groups.
- *Practical considerations* including the time available to you.

4.11 In all cases, it is sensible to begin with a literature review to discover what is already known and is not known in the area of your enquiry. The methods used by the authors of the literature you consult will also provide you with ideas about your own possible enquiry methods.

## Participants

4.12 Examples of possible groups of pupil participants have been given above. It is possible of course that you will focus your enquiries on teachers and support staff or a mixture of pupil and adult participants. You may also want to reach out beyond your school to parents or organisations in the community that could support the new curriculum and/or professional learning.

4.13 Whatever mix of participants you have chosen there will be practical issues about how you collect and store your data. These issues were considered during the professional enquiry process last year and will be revisited again this coming year. The NFER guides recommended above also provide you with useful advice on these matters.

## 5 USING ENQUIRY METHODS

### Literature Reviews

5.1 There are many search engines that you can use to undertake literature reviews and details of these can be found in Appendix 1. It is recommended that you use *EBSCO* which is available to you through the Education Workforce Council website. Using this regularly and familiarising yourself with its facilities, will enable you to develop your skills in undertaking searches.

5.2 There are stages which should be followed in undertaking a thorough review of literature. We will be providing you with further advice on how to do this and there is also a wealth of practical information that you can google. The key stages in the process are shown below:

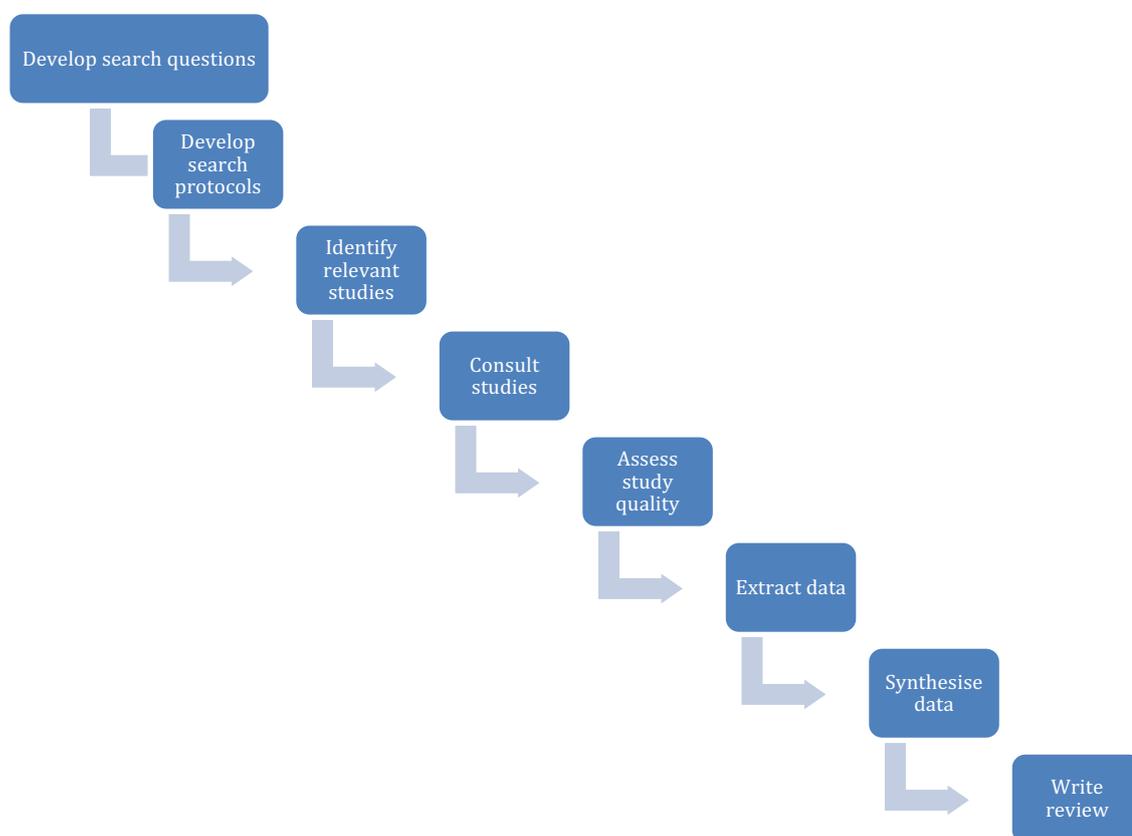


Figure 3: Stages in a literature review

## Interviews

5.3 Interviews are a straightforward way to access information and to enable you to ask a range of questions and to probe deeply. Respondents are often more at ease and prepared to offer useful information than in more formal situations. You will need to develop your questioning skills and it is advisable to pre-test questions. You need to recognise that you cannot completely avoid bias in the way that you carry out interviews or interpret the findings and this does affect the validity of the interviews.

5.4 Whilst it is possible to hold unstructured interviews where you have an interactive conversation, it is more advisable to hold semi-structured interviews. This would require you to draw up an outline of the questions you want to ask and to share these with the interviewee. This would not prevent you asking follow-up and additional questions.

5.5 Whilst you could take interview notes, you are advised to get the permission of the interviewee to record the interview. This would enable you to transcribe the interview and the possibility that you might use coding techniques to analyse it.

## Focus Groups

5.6 These enable you to collect data from a larger group of individuals than one-to-one interviews and to create a group dynamic that might produce richer information. They are not so easy to manage as single interviews, with the possibility that they might move off-track. Some informants may not be as comfortable in providing information as they would in one-to-one interviews. The amount of data collected can also be difficult to analyse.

5.7 As with interviews, you need to develop your skills in purposeful questioning and keeping the conversation on-track. In focus group situations, you also need to ensure that all participants have a chance to participate and that some don't dominate the discussion.

5.8 You should follow similar processes for preparing for focus groups and recording them as with interviews.

## Observations

5.9 Observing learning and teaching contexts including conversations between pupils and teachers, can result in rich data being collected in natural settings. It is best that you become part of the group being studied, either in an overt or covert way.

5.10 Observation can, of course, lead to changes in behaviour by those being observed. It can also lead to a large amount of data being collected that is difficult to analyse. There are also issues about how 'generalizable' the data may be.

5.11 Structured observation is a way of overcoming some of these challenges. This would require pre-developed structures which enable what is being observed to be captured in a systematic way. This should be done unobtrusively and is time-consuming.

## Case Studies

- 5.12 This would involve looking at some aspect of learning and teaching in depth in probably a single classroom or group of pupils. It would need to be undertaken over a sustained period of time to collect rich data.
- 5.13 Whilst case-studies might be generalizable, their value is in capturing a singular and unique learning and teaching situation.

## Surveys

- 5.14 Surveys either undertaken through hard-copy questionnaires or on-line surveys can be an effective way of capturing basic quantitative information. They also allow for anonymity.
- 5.15 It is often difficult to obtain good levels of response to surveys and this reduces their representativeness and validity. They also do not capture the complexity of the areas being enquired into and don't allow for follow-up questions.
- 5.16 The NFER guides referenced above provide you with good practical advice on using survey approaches.

## 6 SPIRALS OF INQUIRY: AN EXAMPLE OF A PROFESSIONAL ENQUIRY APPROACH

6.1 The 'spiral of inquiry' approach to professional enquiry was developed by teachers and school leaders in British Columbia, Canada and is now used in many other parts of the world including Australia. The spiral and its component parts are shown in the diagram below:

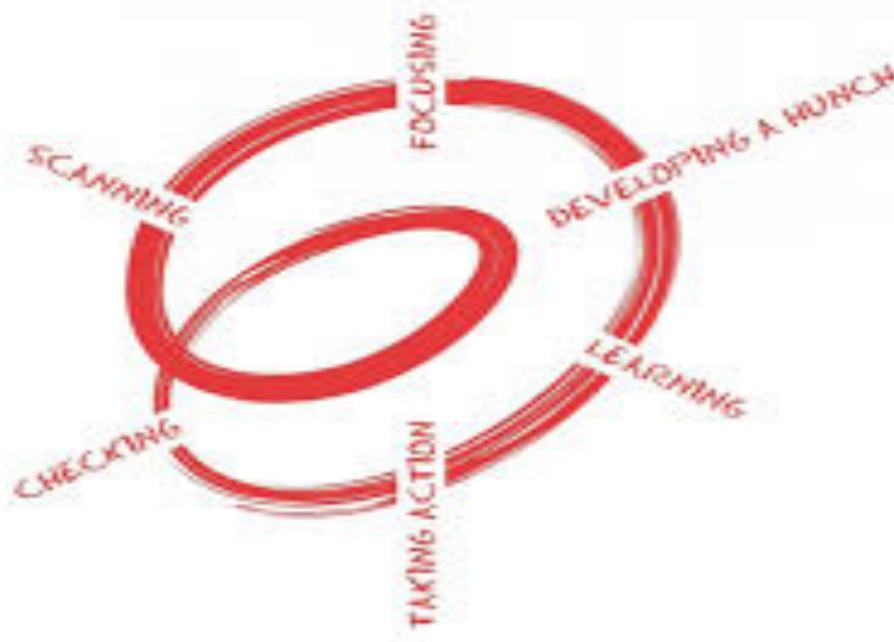


Figure 4: The 'spiral of inquiry': Timperley, Kaser and Halbert (2014).

6.2 This approach presumes that teachers with a curious and enquiring mindset will undertake collaborative work within their schools to seek understanding and solutions to common problems or challenges they face.

6.3 In the context of developing professional enquiry, this would be the issues associated with introducing the new curriculum, including:

- How through the process of 'curriculum making' teachers and schools will develop a version of the curriculum to suit local needs.
- The implications it will have for future learning and teaching pedagogy in future?
- The professional learning opportunities that teachers and support staff will need to access?

## Scanning

6.4 This stage would involve identifying broad enquiry questions of the type that will be included in the national menu for professional enquiry that is being prepared by the Welsh Government.

6.5 This might include developing questions aligned to the themes below which were identified by the professional learning pioneers at an event in Swansea in July 2019:

## Curriculum Planning

- How pupils make links across the AoLEs
- Effective planning that does not impact upon workload.
- Curriculum design processes.
- Joint primary/secondary planning.
- Curriculum time allocation for AoLEs
- Planning skills, experience and knowledge
- Planning across AoLEs
- Embodying the 4 purposes in day-to-day planning

## Pedagogy

- Collaborative learning to build pupil independence and resilience
- Developing progression across a 3-16 cluster
- Opportunities for outdoor learning
- Creativity- what is it and how can it be assessed
- Pedagogy across clusters
- Positives and negatives of particular pedagogies for different age groups.
- Generic and AoLE specific pedagogy.
- Pupil led enquiry

## Focusing

6.6 If professional enquiry is to be meaningful, as was pointed out earlier these themes would need to be narrowed down to appropriate enquiry questions.

6.7 For example, to explore the theme of joint primary/secondary planning, the following enquiry questions could be focused upon:

- How can suitable pedagogies for learning and teaching within the Expressive Arts AoLE be identified?
- What do Y7 and Y10 pupils identify as being the most appropriate pedagogies for their learning within Science and Technology?
- Why do primary and secondary pupils respond differently to the use of authentic learning in Maths and Numeracy?

6.8 The following could be appropriate enquiry questions that allow a narrowing down of one of the themes on pedagogy: appropriate pedagogies for different age groups:

- How might WM 1 in the LLC AoLE (or any other AoLE) be planned for the 3-16 age range in one school cluster?
- What would be the benefits of teachers, support staff and pupils jointly planning a scheme of work for one AoLE across Y6 and Y7 within a school cluster?
- Why do MAT pupils from more disadvantaged backgrounds benefit from joint primary/secondary planning of the HWB AoLE?

## Developing a Hunch

- 6.9 As teachers gain experience, they develop instinctive knowledge (what is sometimes referred to as 'craft knowledge') about what appears to work or not in teaching and why some pupils learn effortlessly when others do not. They often, however, don't challenge or test these assumptions to see if they have a robust evidence base.
- 6.10 In other cases, teachers recognise that certain things they do seem to work with some pupils but not others, or that some pupils respond well to certain stimuli but other, similar pupils, do not. They are aware that there are unexplained circumstances at work, but they often do not take the time to see if they can discover what these might be.
- 6.11 It is in these cases that taking the time to undertake professional enquiries might be productive: to challenge assumptions and to find possible answers. In doing so it is often a good idea to start with a hunch, or what is sometimes called a 'professional itch'. Teachers often are wary of the concept of 'theory' in education practice, although many of them have practical theories of why things happen in their classrooms. This might be at the level of the impact that different types of weather might have on children, to recognising that when children face issues with their wellbeing, which are almost always linked to issues outside of schools, this impacts upon their learning.
- 6.12 In relation to undertaking professional enquiries into the new curriculum and professional learning, bringing these hunches into play in identifying enquiry themes would be a good opportunity to explore them in relation to the possibilities offered by the new approaches they will be introducing into schools.

## New Learning

- 6.13 In their evaluations at the end of 2018-2019 some of the pioneers were quite rightly asking what would be the outcomes of the work they had undertaken? Hopefully, this will be impacting upon the wider development of the curriculum and the National Approach to Professional Learning and the intention is that the work done in 2019-2020 will have even greater impact in this respect.

6.14 If they are to have the impact that they should have, however, this should lead to changes in practice in the schools involved in the work of the professional learning pioneers: both in their own schools and the cluster schools they will be working with in undertaking enquiries. This may require changes- perhaps significant ones- in current practice in these schools so that the new curriculum has the chance of leading to outstanding experiences for learners.

## **Taking Action**

6.15 If the new learning identified through professional enquiry is to be meaningful it will need to be acted upon quickly. The architects of the 'spiral of inquiry' approach believe that if 'nothing changes in terms of action within two or three weeks, it probably will not happen' (Timperley, Kaser and Halbert, 2014:18). This obviously requires resolve on the part of school leaders and a fair degree of certainty that the evidence provided through the enquiry process provides a robust basis for action.

6.16 Leaders will have to persuade staff, parents and perhaps learners that what they are enacting is likely to lead to discernible improvements. They will also need to monitor closely the impact that the changes introduced have upon learners and to recognise that some staff members may feel vulnerable because of these changes and that trust, therefore, needs to be built up.

## **Checking**

6.17 Once changes are made as a result of a professional enquiry, it cannot be assumed that the enquiry process has been completed. Rigorous monitoring and evaluation will be required through an ongoing enquiry process to provide honest assessments on whether change has improved experiences and outcomes for learners and in the professional life of teachers.

6.18 Impact measures would need to be agreed at the outset, including quantitative and qualitative outcomes, so that enquiries can measure impact.

6.19 Checking of course may in effect be another way of re-scanning the environment, starting of a new enquiry process on perhaps why things seem to have worked well in preparing to introduce the new curriculum but other things not nearly as well. The process is a continuous one and having an enquiry mindset should assume that this is ever so and one of its advantages as an agent for change and innovation.

## APPENDIX 1: SELECTED READING LIST

British Educational Research Association (BERA). (2011). *Ethical Guidelines For Educational Research*. Available: <http://www.bera.ac.uk/publications/ethical-guidelines> .

Campbell, A., McNamara, O. & Gilroy, P. (2004) *Practitioner Research and Professional Development in Education*. London: Paul Chapman.

Cochran-Smith, M. and Lytle, S. (2009). *Inquiry As Stance*. New York: Teachers College Press

Drew, V., Priestley, M. and Michael, M.K. (2016). 'Curriculum development through critical collaborative professional enquiry', *Journal of Professional Capital and Community*, (1):92-106.

Gilchrist, G. (2018). *Practitioner Enquiry*. Abingdon: Routledge.

Halbert, J. & Kaser, L. (2013) *Spirals of Inquiry for Equity and Quality*, Vancouver: BCPVPA Press.

Hopkins. D. (2008) *A teacher's guide to classroom research*, Maidenhead: McGraw-Hill/Open University Press.

Kools, M. and Stoll, L. (2016). *What Makes A School A Learning Organisation?* Paris: OECD.

McAleavy, T. (2016). *Teaching as a research-engaged profession: problems and possibilities*. London: Education Development Trust.

Menter, I., Elliot, D., Hulme, M., Lewin, J. and Lowden, K. (2011). *A Guide to Practitioner Research*. London: SAGE.

McNiff, J. & Whitehead, J. (2005) *Action research for teachers: a practical guide*. London: David Fulton.

Welsh Government (2015) *Effective use of data and research evidence*, Cardiff: Welsh Government.

Welsh Government. (2018a) *The National Approach to Professional Learning (NAPL)*. Cardiff: Welsh Government.

## APPENDIX 2: LITERATURE REVIEW SITES

Best Evidence in Brief: [www.beib.org.uk](http://www.beib.org.uk)

Best Evidence Encyclopaedia [www.bestevidence.org.uk](http://www.bestevidence.org.uk)

Campbell Collaboration <https://campbellcollaboration.org/>

Chartered College of Teaching <https://chartered.college/>

EBSCO <https://search.ebscohost.com>

Education Endowment Foundation [www.educationendowmentfoundation.org.uk](http://www.educationendowmentfoundation.org.uk)

EPPI -Centre <https://eppi.ioe.ac.uk/cms/>

Evidence for Impact [www.evidence4impact.org.uk](http://www.evidence4impact.org.uk)

Research Schools Network <https://researchschool.org.uk/>

Teacher Development Trust <https://tdtrust.org/>

What Works Clearinghouse <https://ies.ed.gov/ncee/wwc/>

## APPENDIX 3:

### REFLECTIONS ON AN ACTION RESEARCH PROJECT: IMPROVING UNDERSTANDING OF ART TERMINOLOGY WITH A LOW-ABILITY YEAR 8 CLASS

*Hannah Thomas: St John the Baptist School, Aberdare and Cardiff Metropolitan University*

*Wales Journal of Education (2017) 19:1*

The project started with a broad concern to improve feedback, but was increasing more focused through the course of the research with my research question being '*How can formative assessment be implemented into an ALN art setting to effectively promote and facilitate independent learning?*'.

I chose to work with the pupils in my low ability year 8 class, because I felt that I did not understand their barriers to learning and so was not delivering appropriate content and therefore they were receiving different learning experiences. When pupils are identified as 'less able', Hart et al. (2004, in Wilson 2009: 17) question whether it is a comment on their capacity for learning, and I believe that there is a danger that the label of low ability can create an issue for pupils' expectations of themselves, which was further reasoning as to my decision to work with them.

Pupils are set into the low ability class as a result of testing, they are given IEPs (Individual Education Plans) and receive different levels of extra support. The class size is half the size of the mainstream class acts as a 'nurture group', allowing for more time spent with the pupils, with the aim for movement back into mainstream classes.

Baseline data on the class stated that their National Reading Test scores were below that of the other mainstream classes as the average mainstream class score is 110 and the average in this class is 82. The guidance given by school states that a score of 70-85 is classed as 'low average'. This indicated the potential need for differentiated instruction as well as feedback.

The final intervention made two significant changes to my practice. The first was to design a 'sticker' using visual cues to make feedback more concise. The second was to produce several examples of completed art work, from poor to excellent. This was a more visual method of providing lesson aims and success criteria for the pupils. This system also engaged pupils in critical reflection of their own work, and the work of their peers. In doing so it enabled pupils to embed knowledge of key art terms through writing, oracy and creating art work; improved their confidence and independent learning; and improved their ability to speak and evaluate the work of their peers.

In this article I will, firstly, briefly discuss my methodological approach and the key literature that informed the decisions I made. I will then discuss the findings, and give more detail on the process of the development of the intervention. In conclusion, I consider the importance of practitioner research for teachers and teaching.

#### *Methodology*

For my research, I decided to adopt a primarily qualitative approach to data collection. This is due to the nature of Art and Design and my research being primarily aimed at both measuring and assessing pupil's progression, artistic knowledge and attitude towards learning; all of which are difficult to measure quantitatively. Also, the inquiry was based on gaining insight into teacher and pupil attitudes and perceptions of current feedback practices in school. This requires a 'thicker' interpretation of views, which is the prime function of qualitative data (Bell, 2010). The data was collected through the use of recorded 1-1 interviews, questionnaires, structured and unstructured conversations and worksheets (that included sentence starters, cloze questions and self-assessment questions to understand if pupils could use terms in the correct contexts). These were carried out before, during and after the intervention, during lessons. I also kept a journal in order to reflect on each stage of the research. BERA (2011: 5) states that 'individuals should be treated fairly, sensitively, with dignity and within an ethic of respect and freedom from discrimination'. Therefore, all pupils in the class (thirteen) were invited to take part in the research, but needed to consent. They were also reminded throughout interviews and questionnaires that they could remove themselves from the research at any point. I carried out the research over the course of six, one-hour lessons with a focus group of seven pupils.

### *Findings and analysis*

During my initial reconnaissance phase, less than a fifth of pupils said that they always understood feedback, and over three quarters said that they didn't understanding it some or all of the time. These initial figures and pupils' reactions to questions on the topic of feedback suggested the need for change.

Pupils also completed a questionnaire which asked them if they understood, and to give definitions of tone, colour, presentation, detail and scale. These terms were chosen due to their frequent use in feedback and instruction. Only one of the seven pupils gave correct answers, and the remaining pupils answered that they either didn't understand these terms, or defined them in a different context or incorrectly.

The staff were also sent a questionnaire on their views of feedback. There was a consensus that feedback is important, but three quarters stated that they think that pupils in their low ability class only understand it 'sometimes'. A quarter of staff said that pupils in their low ability class struggle to work independently and just under half said that they don't appear to display confidence when working.

Three broad themes emerged from coding the data:

- Motivation and confidence
- Understanding of task
- Understanding of keywords

These themes, from my initial data collection, when cross-referenced with the aim of my research, were then distilled into sub themes:

- Independent learning and soft skills such as behaviour and motivation

- Quality of work
- Language and understanding

These themes then became the basis of my research of the wider literature, in order to gain a deeper knowledge and insight, to help me understand the issues, develop an appropriate pedagogical response and evaluate any impact I made.

### *Key literature*

Assessment for learning (AfL) or formative assessment, is defined by the Assessment Reform Group (2002: 2) as the 'process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there'. Gipps et al. (2000, cited in Hargreaves, 2005: 215) describes AfL as using the information gained via assessment to identify whether a recap of the task, time for further practice, or movement onto the next stage in learning is needed. Wiliam (2006, cited in Education Scotland, no date) describes formative assessment as the tools, which are used to improve learning and achievements by adapting teaching, based on information gathered from pupils' prior achievements.

Black et al (2004: 2) state that from evidence in over 250 articles, the positive effect that formative assessment has in raising pupil attainment is undeniable. Research states that in order to promote learning, it is imperative that formative assessment becomes the cornerstone of teaching and learning and not a 'tick-box' task or a 'bolt-on' (DCSF, 2008; Donaldson, 2015).

In writing about assessment, many researchers write of a metaphorical 'gap' - where the 'gap' might refer to the space between where pupils are in their learning and where they aim, or where the teacher aims for them to be (Weeden et al., 2002; Price et al., 2010; Hargreaves 2005; Hughes 2014). AfL therefore could be described as the tool that can close this space and move learners forward.

I then direct my literature review to consider the question: *How can formative assessment be effectively implemented into an ALN art setting to promote and facilitate independent learning?*

A problem that I faced as an art teacher which led to this focus, is that it is difficult to know what 'effective' formative assessment *looks like* and how it can be practically implemented. The subjective nature of the work created in art, and the need for whole school consistency in regard to feedback, makes it difficult to be able to effectively and regularly provide feedback whilst paying heed to both the department's and wider school's expectations and approaches.

Another challenge I faced in my teaching was finding ways to meaningfully and explicitly embed formative assessment strategies into my teaching, whilst also delivering the curriculum, the Literacy and Numeracy Framework and Curriculum Cymreig.<sup>4</sup>

Formative assessment in the arts is challenging. In a recent review of best practice in the creative arts, Estyn (2016: 37) state that ‘teachers provide frequent formative feedback to pupils that focuses on clear success criteria’. Therefore, it became apparent that success criteria needed to be explicit, but in order for this to happen, teachers need to know what they expect from the pupils.

I began to question how art teachers understand the concept of *quality* and what constitutes a desirable completed piece of work, or the ‘gold standard’ for pupils’ work. This is often highly subjective, difficult to articulate, and ‘in the head of the teacher. However, pupils are meant to work towards it. Cowley (2005) also points out the difficulty of remaining impartial when comparing work against each other. Therefore, being explicit is paramount.

My own concept of quality work has come from past experience, as a Fine Arts graduate, and informal conversations with my head of department. As a result, because everyone has different experiences, this creates a diversity in schools’ judgement of the quality work; which is ultimately dependent on the judgement of the individual teacher. In the context of delivering schemes of work, this can create a discontinuity between the teachers’ expectations and the pupils’ understanding of what they are aiming for.

Day (1985 in Gruber, 2008) echoes this barrier that art assessment presents due to the subjectivity of the work and states that often the categories which are used to assess the work against are vague and don’t always promote further learning. Reflecting on this, one of my key aims is to aid pupils in acquiring core vocabulary in art, understanding what key terms mean and what they look like in actual pieces of work. In doing so pupils ought to be more able to understand instruction and lesson aims, and work more independently.

In terms of seeing what these categories and words look like in practice, Sweller et al. (1998 cited in Shute, 2007:7) argue that the use of examples reduce the ‘cognitive load for low-ability students’. Previously I had, in introducing a new topic or piece of work, only given one, excellent example. As a result of the literature, I thought that multiple examples displaying different levels of quality in each category might help pupils’ understanding and lighten the cognitive load. In addition, the use of other examples, not only an excellent, largely unattainable one, might improve pupils’ motivation and self-efficacy.

As mentioned at the start of this article, I wanted to find a way to improve the motivation, confidence and the quality of the work made by the pupils in my focus group by giving them tools

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<sup>4</sup> The Literacy and Numeracy Framework (Welsh Government, 2013) and the Curriculum Cymreig (Qualifications, Curriculum and Assessment Authority for Wales, 2003) are both statutory requirements in Welsh Schools.

to achieve an outcome of which they were proud. Rethinking AfL, visual representation of expectations and a range of visual examples seemed to be good ways forward.

### *Developing a visual scaffolding system for formative assessment*

The focus of my project was initially general research into the effectiveness of feedback. When my research began, it had the working title 'Using feedback to help pupils with ALN to learn'.

During the reconnaissance stage, through pupil voice activities, it was clear that pupils couldn't access their feedback. The two main reasons for this were the comprehension of it and the ability to read the handwritten feedback. Due to the need for whole school consistency, prior to the intervention, feedback consisted of a model of WWW and EBI (What Went Well and Even Better If) and it typically consisted of 4 sentences.

I began by making small changes to my practice using a simple inquiry cycle of consider, plan, do and review. During this development phase I ran four cycles of the inquiry:

1. I designed a sticker which had visual cues to information and made feedback concise.
2. I realised they didn't understand some words, e.g. 'presentation', in an art context so had to further develop the sticker.
3. I taught the words and added relevant symbols to the sticker as further visual cues.
4. I realised that the sticker was a first step and instead, I had to focus on helping pupils understand the words visually, and know how to apply them in order to improve understanding of feedback.

During each cycle, informal discussions and evaluation by pupils identified the next iteration of the sticker.

During the fourth cycle, I wanted to use the system more extensively to teach pupils how to recognise what was required and how to improve their ability and skills through the use of effective AfL. I decided to focus on my most commonly used artistic key terms:

- Tone
- Colour
- Presentation
- Detail

Over a series of four lessons, working on one art project, pupils were supported in focusing on one of these key categories. They used the new AfL approach in relation to one key term per lesson.

The final version of this system for AfL in my classroom had two clear aspects. The first was the sticker (fig. 1), developed in several cycles, to support pupils to assess their own and peers' skills. The second was not just using one, teacher made, excellent example. Pupils were instead

given five examples of varying quality, focusing on the theme for that lesson, e.g. tone. During the starter, pupils worked collaboratively to place the examples in an order from unsatisfactory to outstanding and were encouraged to articulate why they were in that order. Pupils then used this as a visual signpost in the lesson and it aided their understanding of how to improve their work.

Corden (2000 cited in Hodgen and Marshall, 2005), defines scaffolding as the facilitation of learning by the use of organised learning opportunities which allow pupils to develop and extend their current knowledge. By differentiating the quality of the expected outcomes and providing different levels of learning opportunities, my aim was that all pupils would feel empowered and feel that they could achieve at least one of the standards.

It also made the expectations explicit and, as Gruber (2008) states, the use of objective outcomes which relate explicitly to clear criteria can reduce the ambiguity. Shute (2007) points out that ambiguity and uncertainty are disconcerting, and so reducing this may increase motivation. Therefore, I believed that by concentrating on making the feedback and assessment process more explicit, it would (and did) improve the progress of these pupils and help them to become more confident, independent learners. I found that because pupils were more aware of the process of feedback and assessment, they were more engaged and motivated to make progress because they could recognise it.

Black et al (2004) describe how written feedback can often be conscientious, but it may not offer learners adequate information or guidance which is needed to improve. By using this scaffolding system, I found that the feedback I was giving to pupils during the lesson was with the purpose of aiding pupils in reaching the next standard. This enabled them to progress in their learning in part by embedding, visually and kinaesthetically, the meanings of the terms we focused on.

William (2011: 66-67) explains how a teacher chose three exemplar pieces of work from the class and then the pupils were asked to explain the 'good' aspects of these pieces of work. William continues by stating how this serves two important purposes. The first is that it provides 'concrete examples' of how a 'good' piece of work looks. The second is that it enables the pupils to be more engaged with the feedback process. As it is more cognitively challenging for them to compare their work to an exemplar piece, recognising strengths and improvements, this is preferable to simply receiving feedback from a teacher or peer. Similarly, my 'signpost examples' were also used during the plenary of the lesson for peer and self-assessment. This gave pupils the chance to assess their work and use their oracy skills to assess the work of a peer.

I wrote at the start of this article that my aim was for pupils to become more independent and have more understanding of artistic terminology, and that this was in order for them to make the same relative progress as the mainstream classes. Pupils demonstrated through their work that they understood what was being asked of them, and they tried to solve problems themselves by asking their peers and going to look at the examples on the board without asking for help numerous times during the lesson.

The outcomes of the intervention were the improved quality of their work, the improved understanding of artistic terminology and the increase in confidence and motivation.

Discussions with the focus group indicated that they valued seeing examples because they could see where they thought they could go 'wrong', they knew to take their time, and they commented on their improved confidence, almost seeming surprised at what they had achieved.

Pupils' work also improved in quality, with the work before the intervention being cross moderated with my Head of Department as level 4, and the work after the intervention as level 5-6. The work demonstrates that they have a greater understanding of each of the terms through the use of tone on the face, the quality of their presentation in comparison to previous work, and the addition of detail.



Fig. 2 - Work made prior to the intervention

Fig. 3 - The work from the intervention

Pupils could confidently, with the aid of sentence guides, write about their work and the work of their peers (as indicated by these worksheet extracts):

'I have used detail well because it is neat and has very good contrast. I have presented my work well because it is eye catching'

'It looks very detailed because it has strong cheekbones. She has shaded all the light bits and dark bits'

They were also far less afraid of making ‘mistakes’. It could be argued that the creativity of the pupils was restricted with the guidelines of the scaffolding system, however, as pupils become more confident, the aim is that the system becomes less needed or is developed to allow for more freedom.

### *Reflections on conducting action research*

In an ever-changing education system where the role of the teacher seems overly controlled by outside factors, the need for teachers to be researchers helps to regain some of this control and make changes which make a direct benefit on the learning of the pupils – which should always be our central focus. The busyness of school, sometimes can mean that it is difficult to pay sufficient attention to the teaching and learning experiences of pupils.

I believe there is a real need for schools to be homes of action researchers, although I acknowledged the difficulties this presents with teaching commitments, the support it requires and the time to carry out such research. We are encouraged to be reflective as teachers, however an action researcher is a reflective practitioner, but with the addition of data collection techniques and a research literacy to make sense of the reflection (Denscombe 2014; Bell, 2010).

Action research and teacher leadership also have a positive impact on the confidence and morale of the teachers. Recently, *The Independent* (Cassidy, 2015) reported that a study conducted by the National Union of Teachers found that over half of teachers are thinking of leaving teaching within the next two years. If teachers are to take more autonomy over their practice, I believe they are more likely to stay.

I also think that it is important to engage in conversations with critical friends. Throughout my research, I engaged in regular conversations with my Head of Department, and senior leaders within the school to gain other insights into my research, to help understand my data, and to hear from more experienced practitioners than myself. The Welsh Government (2010) talk of the dialogue that should be created by feedback which leads to the progress of the pupils. I also think this applies to teachers and that continuous conversations within and between departments and teachers as a whole are paramount if we are to progress. If practitioner research can potentially have a positive impact on the lives of pupils, I believe that we are doing them a disservice by not engaging in or sharing it.

By conducting this research, I have become more reflexive, evaluating and making changes in my practice through a greater understanding of the relationship between teacher, pupil and classroom context. I have become more proactive in talking to and sharing good practice across departments, I have become more aware of barriers to learning that pupils may face and I have also seen an impact within my department with the use of the scaffolding system in mainstream classes too. I have become responsible for KS3, and have continued to implement and develop tools that aim to make feedback and assessment more explicit and accessible.

I’ve not only seen an impact on my teaching in the classroom, but it has also given me the desire to continue to research and learning in order to provide pupils with the best learning experiences that I can.

Smith (2013: 4) advises that 'The Welsh Government should promote the use of the arts in helping to deliver improved numeracy and literacy, and in reducing the attainment gap'. I hope that by continuing to carry out and share research with other practitioners, the importance of the arts in the curriculum will continue to become more evident.





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