**Reform of Initial Teacher Education in Wales: taking an analytical approach to the issues using activity theory.**

Dr Jan Barnes

Dr Jane Waters\*

University of Wales Trinity Saint David

\* jane.waters@uwtsd.ac.uk

**Introduction:**

This paper is set within the context of systemic change within a national education system concerned to ensure each and every learner grows ‘as a capable, healthy, well-rounded individual who can thrive in the face of unknown future challenges’ (Donaldson 2015 p5). Wales, as a devolved government within the United Kingdom, is in the early stages of dramatic educational change including radical curriculum reform from 3 – 16 years, an overhaul of assessment and reporting arrangements, and a re-visioning of professional teacher standards, initial preparation and continued professional learning. The chapter explains the national context and locates a specific research project within it; the research project considers the change process inherent in the requirements for new kinds of provision for Initial Teacher Education (ITE) across the country. Using cultural historical activity theory (Engeström 1996) as the analytical tool, within a socio-cultural theoretical framework, we seek to explore current challenges within the system that will need to be addressed in order to ensure that the change process might be successful in the longer run.

**National context:**

Wales sits within the United Kingdom. Wales has a population of just over three million people (Welsh Government 2016) and, of these, 18 per cent are children aged 0–15 years. In the 2011 census 19 per cent of the Welsh population reported being able to speak Welsh (Welsh Government 2012a), a drop of 2 per cent from the 2001 census. The development of Wales as a bilingual nation is a central WG policy focus (e.g. Welsh Government 2011 2016b) and the study of Welsh is compulsory in all maintained educational settings until learners are 16 years of age. 23 per cent of people live in households in relative income poverty and 29 per cent of children live in households in relative income poverty (Welsh Government 2017). 15 per cent of children are in material deprivation and low income (defined as below 70 per cent of contemporary income median, before housing costs). This is higher than the equivalent figures for England, Scotland and Northern Ireland (13, 11 and 13 per cent respectively) (Welsh Government 2017).

The Welsh Government (WG)[[1]](#footnote-1) came into being after the first Welsh general election on 6 May 1999, following a referendum on 19 September 1997 in which there was a narrow majority in favour of the devolution of Wales from UK central government. This signified the devolution of responsibility for education within Wales from the UK to the Welsh Government. Now administered by the Department for Education and Skills (DES),[[2]](#footnote-2) education policy for the first decade of devolution was informed by the vision document *The Learning Country* (NAfW 2001), which signalled, amongst other things, a significant change in policy and provision for children in the early years of schooling. The Foundation Phase Framework for children aged 3-7 years (Welsh Government 2015) was rolled out as the statutory early years curriculum from 2008 (see Waters 2016).

The broader context of WG’s overall vision for children and young people as described in *The Learning Country 2: Delivering the Promise* (Welsh Government 2006) is based around seven core aims developed from the United Nations Convention on the Rights of the Child (UNCRC) which are still used by WG in its most recent Programme for Government for Children, (Welsh Government 2015b). In contrast to recent UK wide developments, the UNCRC has been vigorously taken up in post-devolution policy and law in Wales. WG’s stance on children’s rights has been described as emblematic (Rees 2010) of Welsh devolution (see also Lewis *et al* under review/accepted for publication). A central tenet of Welsh Government education policy is related to raising standards of pupil outcomes and breaking the link between attainment and poverty (Welsh Government 2014).

It is within this context of ambitious and emancipatory vision for Wales’ children and young people that significant change is being taken forward within Wales’ education system. A significant driver for educational change has been the falls in the attainment of Wales’ young people in the International PISA performance tables between 2006 and 2013 (Wheater et al. 2013). This drop in performance has continued in the most recent PISA results with the comparatively low performance of Wales’ high achieving pupils in mathematics, reading and science has been identified a significant weakness of the Welsh education system (Jerrim & Shure 2016). WG review of education has involved a wholehearted consideration of the Welsh curriculum including associated assessment and reporting processes, and the systemic review of provision for initial teacher education (ITE). Both reviews took place during 2014-15 and the final reports, ‘Successful Futures’ (Donaldson 2015) and ‘Teaching Tomorrow’s Teachers’ (Furlong 2015) make reference to each other.

The proposals inherent in the curriculum review included a radical overhaul of the way in which the curriculum – the learning experiences of all pupils – is realised. The notion of ‘subsidiarity’ (Donaldson 2015) was introduced to the system. Subsidiarity is described as follows:

‘Subsidiarity means that power stays as close as possible to the action. Rather than relying on a set of rules, which suggest a lack of confidence and can breed corruption, subsidiarity is dependent on mutual trust and confidence which supports positive disagreement and argument. Subsidiarity is about ensuring that power is where it belongs – rather than about empowerment which involves someone in power giving something away’ (Donaldson 2015 p. 99).

In the review of ITE, Furlong noted that, in current provision:

‘Because of the dominant focus on what newly qualified teachers must be able ‘to do’ at their end of their programmes, there is virtually no explicit recognition of the role of research or critical reflection in teachers’ professional learning. As a consequence, newly qualified teachers are not conceptualised nor is there a requirement that they are prepared to be active professionals, with their own judgements to make and with their own responsibilities as leaders of children’s learning’ (Furlong 2015 p.12).

The notion of subsidiarity, alongside the notion of research literacy - the intention that in future ‘student teachers [ought] to be both critical consumers *of* as well as participants *in* research’ (Furlong 2015 p.32) - require significant changes to the way in which teacher education at initial and continuing stages of teacher development is conceptualised in Wales. This observation, as well as recognition of weaknesses in the provision for ITE more generally (e.g. Tabberer 2013), has led to a process of re-accreditation for programmes of ITE across Wales.

Alongside the notion of subsidiarity, the fundamental *purposes* of education for the future, set out by Donaldson (2015) and accepted by Welsh Government (2015c), require a shift of focus from instrumental outcomes by pupils to their wellbeing, engagement and preparation for life. This shift, arguably a culture shift in education in Wales, will make very different demands on the teaching profession in Wales in the future; in order to meet such demands new pathways into the profession are required. The four purposes of the new curriculum, which resonate strongly with the Welsh Government’s stance on children rights as detailed above, are summarized as:

The purposes of the curriculum in Wales should be that children and young people develop as:

* ambitious, capable learners, ready to learn throughout their lives
* enterprising, creative contributors, ready to play a full part in life and work
* ethical, informed citizens of Wales and the world
* healthy, confident individuals, ready to lead fulfilling lives as valued members of society (p.29).

Alongside the process of re-accreditation and the publication of the new curriculum proposals (Welsh Government 2015c), the Welsh Government have set out an over-arching vision for learners in Wales:

‘Qualified for life sets out our vision that learners in Wales will enjoy teaching and learning that inspires them to succeed, in an education community that works cooperatively and aspires to be great, where the potential of every child and young person is actively developed’ (WG 2014 p.4).

One arm of the delivery of the vision is related to the development of the workforce throughout the education system and it is within this national context also that the re-accreditation of ITE is taking place.

Currently in Wales, 96 per cent of ITE is provided through a series of undergraduate and post-graduate programmes of University-based study that include significant periods of time in school at each level of study, and lead to the recommendation for the award of Qualified Teacher Status (QTS). There are also two small school-based graduate programmes that lead to QTS; the graduate teacher programme (GTP) and the ‘Teachfirst’ programme. University-based ITE is currently delivered though three Centres of ITE that work broadly across three (overlapping) regions of the country. The Higher Education Funding Council for Wales (HEFCW) allocates annual intake targets for each Centre of ITE that are informed by Welsh Government’s internal teacher supply modelling processes. For the past 4 years (that is, intake September 2014 – September 2017) the intake targets have remained generally stable, with a total of 871 intended secondary students, 86 at Undergraduate level and 785 at Post-graduate level and 750 intended primary students, 300 at Undergraduate level and 450 at Post-graduate level. In the past two years (ie. entry 2015 and 2016) recruitment targets for secondary programmes have been hard to meet in some subjects, most notable, Design Technology, Computing/ICT, Chemistry, Physics and Modern Foreign Languages.

The content of programmes of ITE are currently focussed, at primary level, across the curriculum with specialism generally offered in early years (Foundation Phase: WG 2015), secondary programmes are subject-related and range across all secondary school subjects. University-based programmes typically include blocks of theoretically based instruction and preparation for the blocks of practically-oriented learning that occurs typically through two long placements of about 8-10 weeks in partnership schools. During placement, also known as school experience, primary students are usually allocated to a class and secondary students allocated a subject timetable. Students work closely with school-based mentors, who are teachers in the school, and are visited around twice per placement by a university tutor. Wales is a bilingual nation with English medium, Welsh medium and bilingual school contexts; 33 per cent of primary 24.5 per cent of secondary schools in Wales are Welsh medium (Welsh Government 2017a). ITE students are placed in a professional school context according to their language ability and ITE pathway. Students studying through the medium of Welsh will generally be placed in Welsh medium, or bilingual schools.

Furlong (2015) identifies a need for new relationships and practices to be developed between the universities currently providing ITE, and their partnership schools in the development of new teachers. Included in these models for new working practices is the development of the use of *clinical practice*. Clinical practice models are those in which there is a greater status given to the role of the partnership schools in the development of teachers; where closer relationships exist between the university-based learning and the school-based learning in programmes of ITE. In particular there is great emphasis on the development of ‘strong links between theory and practice, in a way that helps students to understand and explore the interconnectedness of educational theories and classroom practices’ (Furlong 2015 p.17). In order for this model to successfully evolve there is a need for *co-production* (also called *co-construction*) of the ITE programmes between the schools and the universities in order to build stronger ‘bridges’ between the different forms of professional knowledge available (that is, theoretical input, research and practice in the classroom). To this end ‘clinical practice’ in ITE incorporates opportunities for the student teacher to be able to undertake guided reflection on their own professional development building on their own practice, university-based learning, school-based learning and their own developing theories of practice.

**Local context:**

The research study took place within the context of one provider of ITE, based in South and West Wales, working collaboratively with one of the four regional consortia in Wales that are tasked with improving standards in the education system. A series of pilot projects, designed and negotiated through partnerships between university-based tutors and school-based mentors took place over one acaemic year which were intended to explore ‘clinical practice’ opportunities within current programmes of ITE at primary and secondary level. The research study focusses in the secondary pilot projects. Each of the six secondary projects included collaborative planning to build ‘bridges’ between the university- and school-based learning in order to help the student teachers integrate theory and practice.

**Research Study**

**Theoretical frame**

The study adopts a socio-cultural theoretical framework and Cultural Historical Activity Theory (CHAT) (Engeström 1996) as the analytical tool. Commonly shortened to ‘Activity theory’, this is a developmental resource, which is growing in popularity in education (Barnes & Kennewell 2016, Douglas 2014).

The foundation of activity theory is that human activity consists of much more than mere action, but is a socially-situated phenomenon. It is a framework that examines practice, placing that practice within an environment, whilst investigating not just the process of the practice but also the purpose of that practice (Daniels et al. 2010). This perspective attempts to interpret the complexity of real-time activity, investigating factors that influence the activity such as the beliefs and perceptions of those central to the activity. Engeström et al. (1999) believe that activity theory has much to contribute to research as it allows for analysis of the micro, meso and macro environs in which the activity takes place. This examination of activity or practice in a hierarchy of related environments, allows the researcher to pay particular attention to external influences such as cultural or social stance and political imperative. It is the recognition of these external influences and their impact on education, and in turn initial teacher education, that is likely to bring about change.

An *activity setting* can be described as a model of the relationships between mediating factors which influence activity outcomes (Engeström 2007; see fig 1), for example, how the culture of the organisation or the individual involved in the activity impacts on the outcome(s) of the activity. Engeström (2007) also discusses disturbances or contradictions within the activity setting which impact upon the effective desired outcomes of the activity. These contradictions are not necessarily conflicts, but characterise strains which may exist within the activity. These exist on a number of levels, within a single activity setting, within concurrent or indeed historical activity settings. In this study we are mainly concerned with those contradictions which exist within a single activity setting, either within one mediating artefact, a primary contradiction, or within differing mediating artefacts of the same setting, a secondary contradiction. An example of a contradiction in the current context might be where an activity setting within ITE may be oriented towards student attainment of instrumental standards, where the intention of the ITE programme has shifted towards students developing professionally reflective dispositions towards pedagogic improvements. Another example may be where the expectations of the ITE programme are to produce research-active students, however the programme content does not support the research skill development required to fulfil that outcome.



Figure 1 Activity Setting (Engestrom,2000)

It is a contradiction of this sort within the activity setting which will highlight a need for change and the adjustment to this contradiction will bring about the transformation which is essentially the point of this form of analysis. This recognition should lead to an evolution of a new activity setting where the influencing factors are no longer in dissonance allowing for new and improved practices to take place. However, there may be a danger that the contradiction will either not be recognised or will be discarded as irrelevant. Returning to the previous analogy regarding research-active students, there are a number of options that could be taken following recognition of the contradiction. The first is that the support for research-based practice is improved in the taught programme, removing that contradiction and creating an effective activity. A further option would be to change the outcome, here the goal of a research-active student is altered; this change would however produce a new contradiction between the outcome and the community where there is an expectation of research-capable practitioners (Furlong 2015). The final option is to ignore the contradiction, in this case no change is made and the continuation of ineffective activities occurs.

**Method**

Data was collected via online questionnaires to stakeholders in the process of ITE, namely ITE students and school-based senior mentors, using open questions requiring a text-based response. Senior mentors are those within each school who have oversight of all the ITE students placed there; they are typically experienced and well-placed to respond. The questions focused on learning needed in order to become a teacher, the relationships between theory and practice and the perceived status of the theory and the practice of that theory. The first phase of study involved student teachers and school-based senior mentors on the Secondary PGCE programme and was conducted through both English and Welsh medium. The online questionnaire was sent to 210 students and 45 senior mentors. The participants were those student teachers and mentors involved in the pilot projects as well as those who were not participating in the pilot projects. The questionnaire was distributed electronically via the programme’s virtual learning environment which was accessible by all student participants and via email to school-based mentors.

One of the key purposes of this research is to explore perceptions, and evaluate or discover commonalities between school-based mentors’ perceptions of what it means to develop an effective teacher. Another purpose was to interpret student teachers’ perceptions of what it means to become an effective teacher. Thematic analysis was used to identify patterns of meaning in the response dataset related to aspects of the activity setting. In this sense the aspects of the activity setting were pre-defined codes into which the data was sorted, however perceptions that did not readily align to the pre-defined codes were also noted. This method of analysis is innovative and supports the application of activity theory to the field of education (Barnes 2015, Barnes and Kennewell 2016). The identification of common themes concerning the attitudes of the participants highlighted the most salient meanings present in that dataset, it is within these common themes where contradictions tended to emerge. For example when analysing data pre-coded to “Roles and Divisions of Labour” it emerged there were differences in the perceptions regarding the status of the school-based and university-based learning. The themes which emerged were then associated with the mediating factors of the activity setting for analysis. The mediating factors of the actual setting were interpreted and contradictions noted. The implications of these contradictions were then discussed in order to inform future change.

**Findings**

The response rate of the students involved in the study amounted to 55%, and was greater than that of the mentors, at around 10%. Whilst the response rate of the school-based mentors was small, it was felt that the responses themselves were significantly varied that they indicated a range of perceptions held within the environment of ITE. The ratio of participants responding to the questionnaire who were involved in pilot projects amounted to 10% of the overall respondents.

Contradictions for Student Teachers

There were a number of contradictions existing between the mediating artefacts within the activity setting of ‘Student Teachers’ Perception’. These exist at both primary and secondary levels. The first is a primary contradiction and this exists in both mediating artefacts ‘Tools and Artefacts’ and ‘Rules and Codes of Behaviour’. The contradiction is that there is a difference of opinion regarding the relevance of the tools used to develop as a teacher. Some of the student cohort believe that the most important tools are operational in nature and might be described as: *Tips for Teachers.* Other students appear to recognise the underpinning theoretical ideas as tools for practical applications in their teaching. This contradiction also leads to a secondary contradiction in that there is a clear recommendation from the ITE review that there is a requirement that initial teacher education produces research-capable teachers. However the views of some students imply that they felt that the theoretical ideas they met in University did not necessarily relate to their practice in the classroom. However, it is important to note that whilst a proportion of the general cohort recognised the links between underpinning theoretical ideas as tools for practical applications in their teaching; *all* those students who had been involved in the pilot projects made this link.

Another contradiction within this activity setting relates to the role and status of university-based learning and the role and status of school-based learning. There are a number of students who made the connection between the university-based learning and school-based practice, recognising that the theory underpins the practice; however there were also students who felt that the status of the school-based practice was more relevant to their future employment and therefore of higher status than the university-based learning. In this instance, those student teachers who were involved in the pilot projects perceived the university based learning and school-based learning as being of *equal* import and status.

The final contradiction that related to the student teachers’ perceptions, was that some students identified a form of progression or hierarchy between the blocks of university-based learning and school-based practice. A perception emerged that one undertook the university-based learning and school-based practice in sequence, but that these blocks of learning existed almost in isolation from each other.

Contradictions for School-Based Mentors

It is worth remembering that the respondents to the voluntary survey within this category were limited in number, however, because this study included those within and outside the pilot project schools, the data was varied and thought to cover a range of perceptions within the possible sample.

There was no strong evidence of contradictions concerning the learning needed to become a teacher, unlike that of the student teachers. Many of the tools highlighted as being necessary to the development of student teachers are at an operational level, for example the need to be aware of government requirements, the need to be able to create a learning environment.

There is, however, a possible contradiction between school-based mentor perception and the future of education in Wales. The expectations outlined by Donaldson (2015) and Furlong (2015) are that student teachers will gain research skills implementing practice-based research within the classroom. The ability to conduct classroom-based research with an aim to improving the learning taking place requires a broader skillset than, as stated by the respondents, the ability to recognise and implement government requirements at an operational level.

Alignment

Contradictions appear to arise concerning the roles of the stakeholders in initial teacher education, and it is here that there is an indication of the need for future alignment. Whilst a majority of respondents indicate that they feel that the relationships between the university-based learning and the school-based learning is strong and not in need of change, a few of school-based mentors who stated that changes in roles may *“plug any gaps”;* or that they would welcome greater involvement with the university and closer working relationships.

There is a further, linked, contradiction which arises between the roles of the stakeholders and the organisational structure of the environment. If there is greater emphasis, in future, on the university-based tutor being more involved with school-based learning, the need for a greater collaboration between the partnership schools and the university within ITE is satisfied. However, this change in role for the university-based tutor may initiate contradictions in their working activity, in that the Higher Education Institution requires that they engage in scholarly research-focussed activity above and beyond that which may be inherent in an ITE programme.

The main areas of contradiction appear to exist between the separate parallel activity settings of the student teacher and the school-based mentor. There are two key contradictions. The first is between the “Tools and Artefacts” of the two activity settings;t the student teachers are looking at the tools needed to develop as a teacher and are distinguishing between practical tools and theoretical underpinning. However the school based mentors generally group all the tools as operational. An example is the use of “two ticks and a wish” as a feedback mechanism and assessment for learning technique which is used when pupils are peer-assessing work. The pupils are asked to recognise two aspects of the work they are assessing which meets success criteria (two ticks) and an aspect which could be improves (a wish). The school-based mentors perceive the ability to use techniques such as this within the classroom as important, however, seem less concerned with the student teachers’ understanding of why or even how using these techniques benefit learning. Furthermore, the student teachers appear to recognise the tools solely from a teaching perspective, focusing on their own actions, whereas the school-based mentors regard the tools from the perspective of pupil learning as well in that they are linked to the creation of *“positive learning environments”*.

The second key contradiction relates to the perceived status of school-based learning and university-based learning by the student teachers and the perceived need for closer working practices by the school-based mentors. Resolving this contradiction is likely to impact upon the activity setting of the student teacher and involves resolving the tensions regarding the perceived difference in status of the following:

* theoretical study and practical application,

university-based study and school-based study.

**Implications for the Future:**

The findings and interpretations from this study have implications for the future implementation of ITE in Wales. In light of the changes proposed by both Donaldson (2015) and Furlong (2015) for education in Wales it will be vital that the existing provision of ITE also changes in order to create teaching practitioners able to take those recommendations forward in the near future. In order to do this effectively, we suggests that the key contradictions indicated above need to be resolved.

One of the initiators of change in the system is related to Donaldson’s notion of subsidiarity, and the need to tailor a curriculum that meets the needs of the learners at a local level. However, teachers in Wales, like England, have been practicing within the confines of a National Curriculum, which has been centrally prescribed, since 1988. It is prudent to speculate that the skills needed for curriculum design to enable subsidiarity may no longer exist within the workforce. It is imperative therefore, that these skills re-emerge through initial teacher education. However, for this to take place there needs to be a change in perception of existing teachers in recognising the importance of this skill. The study highlighted that the school-based mentors’ perceptions were that those tools important in becoming an effective teacher were largely at an operational level. Students who had been involved in the pilot projects tended to rate operational skills and research-related theoretical knowledge similarly, though those students who had not been involved tended to rate operational practice-focussed skills as more valuable. Skills of this type, whilst important, are unlikely to bring about subsidiarity as Donaldson sees it. It is important that practitioners are proactive as effective, research-informed designers of curricular experience to bring about meaningful knowledge creation for their pupils. This being the case, it is suggested that the success of future initiatives in education may require the teaching workforce, including those entering it, to recognise a need for change in their perception of different forms of professional knowledge.

Further implications for future change in the design of initial teacher education relate to the way in which the status of the university-based learning and the school-based learning is viewed by stakeholders. There is a need for greater collaboration between the university and the mentoring schools in order that all stakeholders recognise the need for equal status between different forms of knowledge and partnership between those providing access to them. In this way it is likely that that there will be greater recognition that *theory* and *research* do not exist as separate entities from *practice*, but that they underpin and interweave with pedagogic decision making and provision in the classroom.

There is also a case for evaluating the ITE curriculum design with a view to altering the way in which the programmes are presented. ITE is generally delivered in blocks of university based leaning followed sequentially by blocks of school-based learning. It is this format and division of labour which, arguably, perpetuates the student teachers’ perception that the learning in each block is separate and distinct. In order for transformative learning, of the sort required in effective ITE, to take place the learning needs to relate to a ‘coherent body of experience’ (Mezirow 1997 pp5). This study indicates that currently many student teachers perceive that their ITE learning is separated into theoretical and practice-based *blocks*, separated temporally, spatially, geographically and, most significantly, cognitively; such separations present a barrier to transformative learning.

Implications for change also focuses on possible difficulties which may be faced by university-based lecturers operating in a university culture which has traditionally associated value to theoretical research rather than practical application. The opportunities for the university-based tutor to build a classroom-based research culture within partnership schools may be limited unless the value of practice-oriented research activity is recognised, as indicated by Furlong’s (2015) in the call for the inclusion of *clinical practice* in the development of future student teachers.

To that end we would suggest that if an enquiry-based profession is to be achieved then university-based tutors need to have ‘a foot in each camp’ and blend the requirements of sets of skills and knowledge associated with both research enquiry and practical application, in order to design and maintain a model of *clinical practice* in the initial education of teachers of the future.

**Concluding note:**

This piece of work, undertaken in 2015-16, has helped shape the development of the Centre’s partnership activity and the design of its ITE programmes. All existing ITE programmes, primary and secondary phase, undergraduate and post-graduate routes, have been revised to ensure that there are *blurred edges* between theoretical and practical aspects of learning. This *blurring* has been supported by engaging students in co-constructed episodes of learning in which school-based mentors and university-based staff jointly design an element of ITE curriculum. In such co-constructed elements there are activities that act as a *bridges* between different forms of knowledge. Central to such *bridges* are cycles of reflection embedded in the ITE student learner journey, through which the explicit reflection on both practice-based and theoretically-informed forms of knowledge is supported. The *blurring* has also applied to the blocks of university-based and school-based learning, there are now weeks of shared activity where *bridging* work takes place between the two sites of learning; and different forms of knowledge are explicitly drawn upon across both sites. To date, such development has been warmly received by all stakeholders in our wider community; we have on-going evaluation projects to ascertain the impact of such changes on ITE student outcomes.

**References:**

Barnes, Janine Michelle Ida. "Changing perceptions of ICT at KS3: a critical investigation using activity theory." PhD diss., (University of Wales Trinity Saint David, 2015)

Barnes, Jan, and Steve Kennewell. "Investigating teacher perceptions of teaching ICT in Wales." Education and Information Technologies (2016): 1-13.

Daniels, H., A. Edwards, Y. Engeström, T. Gallagher, and S. R. Ludvigsen. "Activity theory in practice." (Oxon : Routledge 2010).

Donaldson, Graham. Successful futures: Independent review of curriculum and assessment arrangements in Wales. (Cardiff: Welsh Government 2015)

Douglas A.S. *“*Student Teachers in School Practice – An Analysis of Learning Opportunities” (Hampshire: Palmgrave Macmillan 2014*).*

Engeström, Yrjo. "Interobjectivity, ideality, and dialectics." *Mind, culture, and activity* 3, no. 4 (1996): 259-265.

Engeström, Yrjo. "Activity theory as a framework for analyzing and redesigning work." Ergonomics 43, no. 7 (2000): 960-974.

Engeström, Yrjö. "Expansive learning at work: Toward an activity theoretical reconceptualization." Journal of education and work 14, no. 1 (2001): 133-156.

Engeström, Yrjö. "Enriching the theory of expansive learning: Lessons from journeys toward coconfiguration." Mind, culture, and activity 14, no. 1-2 (2007): 23-39.

Engeström, Yrjö, Reijo Miettinen, and Raija-Leena Punamäki. Perspectives on activity theory. (Cambridge University Press, 1999).

Furlong, John. "Teaching Tomorrow’s Teachers. Options for the future of initial teacher education in Wales." Report to Huw Lewis, AM, Minsiter for Education and Skills (2015).

Jerrim, John, and Nikki Shure. "Achievement of 15 year olds: Program for International Student Assessment national report: 6 December 2016." (2016).

Lewis, Alison., Sarwar, Sian., Tyrie, Jacky., Waters, Jane. & Williams, Jane. “Exploring the extent of enactment of young children’s rights in the education system in Wales” Accepted for publication (Wales Journal of Education 2017).

Mezirow, Jack. "Transformative learning: Theory to practice." New directions for adult and continuing education 1997, no. 74 (1997): 5-12.

National Assembly for Wales. "The Learning Country: A paving document." Cardiff: NAfW. Available at: http://www. elwa.ac.uk/doc\_bin/SkillsObservatory/learning\_country\_paving\_document. pdf (2001).

Rees, Osian. "Dealing with individual cases: An essential role for national human rights institutions for children?." The International Journal of Children's Rights 18, no. 3 (2010): 417-436.

Tabberer, Ralph. "A review of initial teacher training in Wales." Welsh Government, Cardiff, http://wales. gov. uk/docs/dcells/publications/131007-review-of-initial-teachertraining-in-wales-en. pdf (2013).

UN Committee “Concluding Observations on the Third and Fourth Combined State Party Reports of the United Kingdom under the Convention on the Rights of the Child “(CRC/C/GBR/CO/4, 2008)

Waters, Jane. "The Foundation Phase in Wales–time to grow up?." Cylchgrawn Addysg Cymru/Wales Journal of Education 18, no. 1 (2016): 179-198.

Wheater, R., R. Ager, B. Burge, and J. Sizmur. "Achievement of 15-Year-Olds in Wales: PISA 2012 National Report." (2013). Available at: <http://www.nfer.ac.uk/publications/PQUK02> [Accessed 08-01-17].

Welsh Government “Rights to Action.” (Cardiff: Welsh Government. 2004)

Welsh Government “The Learning Country 2: delivering the promise.” (Cardiff: Welsh Government. 2006)

Welsh Government “Our Welsh Language Scheme” (Cardiff: Welsh Government. 2011) Available online at <http://gov.wales/topics/welshlanguage/policy/wls/?lang=en> [Accessed 19-12-16].

Welsh Government “Census 2011: Number of Welsh speakers falling.” (Cardiff: Welsh Government. 2012) Available online at <http://www.bbc.co.uk/news/uk-wales-20677528> [Accessed 19-12-16].

Welsh Government “Qualified for Life.” (Cardiff: Welsh Government. 2014)

Welsh Government “Foundation Phase Framework: revised.” (Cardiff: Welsh Government. 2015) Available online at <http://gov.wales/docs/dcells/publications/150803-fp-framework-en.pdf> [Accessed 19-12-16].

Welsh Government “Programme for Government for Children.” (Cardiff: Welsh Government 2015b)

Welsh Government “A curriculum for Wales – a curriculum for lif*e*.” (Cardiff: Welsh Government. 2015c) available online at <http://gov.wales/docs/dcells/publications/151021-a-curriculum-for-wales-a-curriculum-for-life-en.pdf> [Accessed 19-12-16].

Welsh Government “Mid-year population estimates June 2015.” (Cardiff: Welsh Government. 2016) Available online at <http://gov.wales/statistics-and-research/mid-year-estimates-population/?lang=en> [Accessed 19-12-16].

Welsh Government “Welsh-medium Education Strategy: next steps.” (Cardiff: Welsh Government. 2016b) Available online at <http://gov.wales/docs/dcells/publications/160309-next-steps-en-v2.pdf> [Accessed 19-12-16].

Welsh Government “National statistics: Households below average income” (Cardiff: Welsh Government. 2017). Available online at <http://gov.wales/statistics-and-research/households-below-average-income/?lang=en> [Accessed 08-01-17].

Welsh Government “National statistics: address list of schools.” (Cardiff: Welsh Government. 2017a) Available online at <http://gov.wales/statistics-and-research/address-list-of-schools/?lang=en> [Accessed 08-01-17].

Williams, Jane, ed. The United Nations convention on the rights of the child in Wales. (University of Wales Press, 2013.)

1. Previously the National Assembly for Wales (NAfW) then the Welsh Assembly Government (WAG). [↑](#footnote-ref-1)
2. Previously ACCAC (Awdurdod Cymwysterau Cwricwlwm ac Asesu Cymru: the Welsh Assembly Government department for curriculum and qualifications) and Department for Children, Education and Lifelong Learning and Skills (DCELLS). [↑](#footnote-ref-2)