

ECAD6012

Cross Curricular Responsibilities: Literacy,
Numeracy and Digital Competence

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This assignment will be discussing the Welsh government expectation of all teacher's responsibilities to teach Literacy, Numeracy, and Digital Competence across the curriculum. The benefits and limitations of cross-curricular teaching will be individually explored and critically evaluated. This will then be synthesised to assist the writer to identify both personal targets needed to address the requirement of the new curriculum. Also, recommendations will be made for those involved in providing education in Welsh schools.

The Welsh Government commissioned Professor Graham Donaldson in 2014 to review the curriculum and assessment arrangements in Welsh schools. In England and Wales, the curriculum has been similar but has developed to meet local needs. The review involved evidence gathering both in Wales, in the United Kingdom and Worldwide. Discussions were held with children and young people, parents and carers, business and industry, community organisation and school staff. Estyn and other reports and Welsh policies were also examined, and together with school visits, it was established the curriculum needed to change. Donaldson produced the report 'Successful Futures' (2015a), which suggests how the curriculum needs to be changed and updated to meet the needs 21st century in life skills and the world of work.

Donaldson is aware of the limitations of the current curriculum has on a child's development as the 'curriculum defined largely in terms of discrete subjects can become directly translated into a timetable within which important cross-curricular learning can be marginalised.' (Donaldson, 2015) The implementation of the new curriculum in Wales is centred around practitioners of education, providing the appropriate and efficient skills children need through cross-curricular teaching.

A cross-curricular teaching approach is the combination of both core and non-core subjects in the current curriculum or the new AOLE's within the new curriculum for Wales. Where knowledge, skills and attitudes of a number of different disciplines are applied to a problem, idea or experience that supports, and works together to create an interdisciplinary approach. (Barnes, 2015; Hayes, 2010)

This cross-curricular approach can be applied to both teaching and learning, where education is at the focus. However, the cross-curricular approaches are considered to have implications, and this includes the 'style of pedagogy, classroom organisation, environment and interactions.' Barnes (2015) shows that there are a variety of factors that can affect the cross-curricular approach that need to be considered when teaching and learning using this method.

The Welsh Government working alongside Donaldson have set out the three cross-curriculum responsibilities; numeracy, literacy and digital competence. As shown in both documents 'A Curriculum for Wales- A Curriculum for Life' and 'Successful Futures' the three cross-curriculum responsibilities are key competencies and skills which are the foundations to every individual child's learning. These responsibilities have been implemented in the new curriculum as it has been seen that they are essential for the child to experience and to participate positively and confidently within the experiences provided to them to take and problem solve within places in a real-life situation. All professions and, individuals working

with children and young people have been made aware of the Donaldson's 12 Pedagogical Principles. Where one states '*reinforce cross-curricular responsibilities, Literacy, Numeracy, Digital Competence*' and provides guidance. (Welsh Government, 2015; Donaldson, 2015; Impact Wales, 2018)

In cross-curricular teaching, teachers need to promote digital literacy to develop digital competence. To enable children, have access to a wide range of experiences and resources that they can apply to a variety of digital tools. However, due to schools having lack of funding a variety of digital tools can be limited for children to access within their education. As writer has experienced within their teaching practice, that not every school has computers within the class or an ICT suite, or iPads for every class. Promoting equality and fairness, Hayward states in recommendation six that all learners and teachers have the '*freedom to access rich learning and teaching resources from anywhere, at any time and from any device.*' (Hayward, 2012, p. 6). Hayward has identified the limitation of the lack of resources within primary schools across Wales. His recommendations are what needs to be improved for children and teachers to gain new skills using different technology in a collaborative way that will be key to future lives, as stated in his Vision Statement. (Hayward, 2012, p. 4; Hague and Payton, 2010)

The cross-curricular approach has been highly promoted in the new Donaldson curriculum, and a variety of research has proven that the current curriculum is not providing the functional skills required in both information communication technology (ICT) lessons and core subjects. (Hague and Payton, 2010; Homiakova, Arras and Kozik, 2017) Many lessons have been observed by the writer where pupils are practising their writing skills within another subject area, not just in literacy. Illustrating that children should be given more opportunities to use and practice the skills of digital technology incorporated in subject areas, not just in ICT as a standalone subject.

The Digital competence wheel was created and made public in 2009; this is to support practitioners and individuals to assess their skills in digital competence, this has helped the writer to find out where they are strong and weak in their digital competency, where they need to improve and how they are going to further their skills in digital competency. The self-evaluation approach has been used to raise the skills of every practitioner and to understand the importance of children and young people also developing their digital competence skills across all subject areas. (Digital Annelse, 2015)

As schools within the new curriculum are prompting digital competency, this means children are developing digital skills from a younger age. This can cause children to become vulnerable online as they do not fully understand the concept of online safety and putting themselves at risk. Ofsted and Byron imply that promoting Digital Competency within primary schools is a risk to all pupils accessing overage games, inappropriate videos and websites. They state this limitation of using Digital Competency as a cross-curricular approach as children can become exposed to cyberbullying, their personal information being misused and very vulnerable to online scams. In identifying one of the key limitations of children having access to digital devices; the new curriculum improvements need to ensure that the UK Child Internet e-Safety Council inform and make parents and children of

all ages aware of the consequences of using a digital device. (Byron, 2008; Ofsted, 2013) Developing on this key aspect the awareness of this point has been carried out into schools across Wales, as the web search DKFindout.com is a child friendly research method used that the writer has used and experience in their own practice.

As the current curriculum for Language, Literacy and Communication skills are a combination of oracy, reading and writing. Donaldson has reviewed how beneficial this area of the curriculum is and has kept it as one of his six new AOLE's. (Welsh Government, 2019; Donaldson, 2015)

By comparing the work of different researchers, they all have similar views on literacy within the curriculum, as they state how it is embedded in all areas of the new AOLE's and current subject areas across the curriculum. This is benefit to cross-curricular teaching of literacy, ensures all learners are developing their oracy, reading and writing continuously. (Bentham, Davies and Galbraith, 2015; Goffin, 2015) Equally important, Rowley and Cooper stated the importance of literacy skills as they are the preliminary point for many teachers within their planning for curriculum links. Where they imply, the National Literacy Framework is to be applied across all areas of the curriculum and to develop this incoherent context. (Rowley and Cooper, 2010, p 5)

In contrast, synthesising Jones and Haynes work, they suggest that the interdisciplinary approach to teaching can cause limitations within the pupils' educational development. As the approach can cause integration confusion, they draw on the point that two or more integrated disciplines can lead to a child's insight to be confused. (Jones, 2009; Haynes, 2002, p 17) Subsequently, the writer has observed and experienced a cross-curricular lesson where children were focusing on Literacy and History, where the learning objective was to write in paragraphs, to use capital letters and to use appropriate punctuation. However, the children seemed to miss the literacy learning objective in their writing. The teacher was able to stop the lesson and reemphasise what was required of them. Suggesting for future recommendations that cross-curricular teaching needs to be well planned with clear learning objectives shared with the children and regularly reinforced.

Equally as important, Ofsted (2011) stated that some teachers forget the importance of literacy. As they promote the importance of speech, it supports pupils in their writing and propels them forward. As pupils do not solely improve their writing on 'doing more of it' but focusing on the quality of the writing it is suggested by allowing pupils to discuss within groups or partners their ideas and responses that their writing will improve.

This method of teaching is beneficial and works well in a cross-curricular way. Didau (2014) and Barton (2013) agree in their research that teachers should frequently ask pupils questions to encourage debates and discussions to focus on children developing their speaking and listening across all areas of the curriculum. As this can be used appropriately in a cross-curricular lesson. They urge teachers away from the approach of just teaching literacy and promote literacy as an integral component of teaching and learning that works well within a cross-curricular approach. It is recognised that teachers use speech to teach

pupils and are promoting speaking skills. We use this method in every cross-curricular lesson, and this shows many benefits that pupils can have by allowing them to stop and think about what other people have said, to talk to their group about their thoughts and respond to others ideas. (Didau, 2014; Barton, 2013)

Concurring with Gross (2013), where case studies have shown that the new curriculum offers rich and experiential learning opportunities that allow children to talk. Schools across Wales are using approaches such as Pie Corbett's Talk for Writing and Circle Time, that open up chances for children to embrace and use diverse vocabulary and sentence structure that they may not use in their written work. Vygotsky's (1967) theory states that children should be provided with advanced vocabulary that allows them to develop it as their own. It is proven that children using oracy in cross-curricular lessons are prone to deeper conversation and debate issues. (Gross, 2013; Vygotsky, 1967)

Moving forward into the new curriculum for Wales, Donaldson recommends 'Literacy and numeracy must mean more than basic competence and must acknowledge the central role in thinking and the ability to use language and number confidently and creatively.' (Donaldson, 2015, P 110). This will add pressure to teachers in Wales embedding the new curriculum, to ensuring that their methods of teaching, transferable skills and subject knowledge is up to date, to enable effective practice.

Donaldson (2015) has recognised within report 'Successful Futures' the importance of numeracy in the curriculum in Wales. Emphasising mathematical importance, he has revised the current curriculum. He has given one of his AOLE's to Mathematics and numeracy out of six AOLE's. As the article 'The importance of numeracy across the curriculum' (2001, P 29) states that raising the standards for mathematics are to be given extra attention to improve numeracy in primary schools across Wales to become competence in using skills, understanding and their knowledge. However, this is not only in mathematics but also in a range of other subjects.

In the documentation 'Does Numeracy Matter?' They have proven in their research that some children do not develop a high level of numeracy within education and leave education at the earliest opportunity with either no or low qualifications. This negative impact of having deprived numeracy and literacy skills has proved to be on the increase and due to the decline of unskilled manual jobs does not equip children with the skills required in today's labour market. Employers need staff who can use problem-solving skills and digital competencies to research the answers. (Parsons and Bynner, 2005, p 4) Donaldson (2015, p 9) has also recognised the downfall of numeracy within his successful futures document and has recommended within the new curriculum that this is a key element that needs to be focused on by using critical thinking, creativity and problem-solving opportunities.

Ransom (2012) gives his opinion that mathematics being taught in short bursts is isolating the learning for children. He fully agrees with Donaldson (2015) new curriculum, as this allows children to be made aware of how links are made between curriculum areas and as also innovated in Science, technology, engineering and mathematics. This all provides

children with the links that enable them to gather meaningful and relevant experience to support their learning. (Ransom, 2012)

On the other hand, Study (2019) implies the limitations of using the cross-curricular approach within Primary schools across Wales, as it requires teachers to collaborate and in certain circumstances to team teach to ensure that areas a teacher subject knowledge is not the greatest, the team member is able to pick up those areas to elaborate further. As this is very time consuming in preparing lessons that are shared with every member of staff involved and requires teachers to be very consistent on their time management to ensure positive lessons.

Recommendations have been made by Donaldson (2015) to ensure teachers are using appropriate experiences to promote numeracy within the new curriculum to allow children to make meaningful links between a range of subject areas that will support them in future life situations.

Greenwood (2013, p 4) in the revised new curriculum in Northern Ireland stated the benefits of using a cross-curricular approach. The key feature of the cross-curricular approach to teaching is that it allows teachers to be flexible with their planning to provide children with differentiated work. It promotes integrated assessment, and it activated children's prior knowledge between different subject areas. In contrast, to Northern Ireland's council, who state the new cross-curriculum approach will support teachers and positively support learners to excel in their learning. The limitations of this as not all teachers in Northern Ireland are on board with this change and do not feel that cross-curricular is beneficial and prefer the subject-based curriculum. (Greenwood, 2013, p 4)

As a future practitioner it is essential for the new curriculum, that teachers are aware of models that are successful to use to teach in a cross-curricular approach. One of the most well-known is the Barnes (2015) models, where seven different models can be used within lessons. One of the most common Barnes models is the Theme-Based model, and this can be described most commonly as a variety of cross-curricular lessons planned around one particular theme.

Reflecting on key recommendations from various research throughout this essay, it all comes back to the teacher. The teacher is responsible for promoting, planning and embedding the new AOLE's within the curriculum in Wales with the implementation of using the approach of cross-curricular. All teachers are required to follow the recommendations, ensuring the attainment gap for learners is closed. Donaldson's recommendations in the Welsh Government document (2019) state that all teachers must follow through with the implementation of the three cross-curricular responsibilities which are Numeracy, Literacy and Digital Competency. The cross-curricular approach is the way forward for teaching and learning as pupils can make critical links between a range of subject areas to develop a wide range of problem-solving skills. Thus, assisting them for future life situations through providing enriched learning experiences that the learner enjoys and values.

The writer believes that the cross-curricular approach to teaching the three responsibilities across the curriculum could be very beneficial to children's overall educational development. However, this would only be beneficial if it is embedded correctly by teachers competent in all three areas. The writer acknowledges the areas of the Digital competence wheel, where her professional development is needed. It is suggested that all teachers would benefit from self-assessment of their skills using this and accessing training where needed. Furthermore, they use experiential learning to develop a variety of skills, to plan effectively using appropriate cross-curricular links with clear learning objectives and lastly, to provide pupils with the transferable skill of digital competency.

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