

The purpose of this assignment is to discuss the importance of literacy, numeracy and digital competencies as cross-curricular responsibilities within the curriculum for primary age learners. Through research, personal experiences and evaluation, the key points of discussion are to identify benefitting factors and limitations on how these three competencies can develop and move forward the ways of learning to the new upcoming curriculum and benefit all learners.

Cross curricular teaching has been a focal point for many researchers of education over centuries, who have reviewed and researched the effects it has on education for both teachers and learners. Barnes (2015) describes cross-curricular learning as the application of “skills, knowledge and attitudes of a number of different disciplines that are applied to a single experience, problem, question, theme or idea...” as well as using the “the curriculum as focus”. It mainly focuses on the connections made between subject-related tasks that can be implemented and developed across a range of different subject basis e.g. a mathematical equation being used to find the answer within a science-based topic, also known as a discipline learning and understanding, Boix-Mansilla et al (2000) describes cross-curricular learning as a “disciplinary understanding that is shown when students are able to use the knowledge and ways of thinking of a particular subject discipline, appropriately in novel situations”. The idea of cross curricular also focuses on how these learning strategies that aren’t specifically subject-related can make learning a more enjoyable, engaging experience for learners within the classroom and to develop more forth coming skills that learners will take into their futures with them making them more adaptable which brings in Donaldson’s (2015) ideas of the four purposes within Successful Futures.

There are many educational themes and approaches following Barnes Taxonomy that can affect the benefits and limitations of cross curricular teaching and learning, however, within this assignment the main focus will draw attention to the areas of teacher subject knowledge, planning and learners engagement and involvement and how they can develop the three competencies within our current curriculum moving towards the future of a curriculum that is becoming more focused on the development of learnings concentrating of the four main purposes and pedagogical principles that have been created with all learners in mind, under Successful Futures.

The implementation of Literacy and Numeracy within education has been a priority in Wales since the framework came to light in 2013, following its introduction in 2012. In a review set two years on from the release of the framework, Welsh Government (2015) stated that “more needs to be done to ensure that literacy and numeracy skills are embedded in a meaningful way...”. During the same year that the Welsh Government released this statement, Successful Futures, 2015 reported on how the competencies of Literacy and Numeracy are what help to shape learning, alongside the evolving need of digital competence. Donaldson (2015) reported that “literacy, numeracy and digital competence should be the responsibility of all teachers”. Although there has been guidelines in place since the

official release of a Literacy and Numeracy framework providing teachers and staff with a skills-based need for the two competencies, as a student and trainee there has been a revelation from where these skills were forced upon in all subject areas to where we are now- newly qualified teachers and trainees are learning to plan effectively and prominently for these new requirements of Literacy, Numeracy and Digital Competence skills to be met for all learners. Up until 2019, when the new professional teaching standards came into practice, the trainee teacher would have been expected to achieve their qualified teaching status with a secure knowledge and understanding of the subject(s) they are trained to teach- even though many teachers are fully trained with credentials in a particular subject, it has always been expected of them to have a knowledge of all categories taught within the primary years. In accordance to Barnes (2015) cross-curricular teaching interlinks with the teaching for creativity and he believes that the “intention of the teacher is to stimulate and develop the creativity inherent in every child in any subject of experiential context”, this statement links strongly to the development of cross-curricular teaching as there is an emphasis on the details of subject which brings around the need for teachers to have a secure knowledge and understanding to move the learning forward within the new curriculum of the three competencies in discussion. Furthermore, as we discuss the input of the new curriculum in the moving forward of the three main competencies, the draft curriculum for Wales 2022 reports that “the cross-curricular responsibilities of literacy, numeracy and digital competence support almost all learning and are essential for learners to be able to participate successfully and confidently in the modern world”. The levels of success and confidence here can only be transferred from their experiences and implementations that are made by that of their fellow teachers. Relating to Barnes Taxonomy he opens for discussion that effective cross-curricular approaches needs good teacher subject knowledge- as a trainee this statements strikes debates to agree yes, teachers do need to have this knowledge to be able to support their learners in all areas of learning, however, those individuals who have been in the profession over years of the changing curriculums may argue that they do not need to develop their own skills as they have managed to get by through the years, but also may be filled with fear as they become unfamiliar and less confident in teaching skills across a broader, wider skill set based curriculum. The importance of this today, especially with a growing need of digital competence skills needing to be taught to develop learners into a modern world, is that older teachers who have been in the profession for decades are not at the same digital levels of the new, upcoming, qualifying teachers who are understanding the skill set. However, in the case of digital competency and preparing our learners, it is essential that we as teachers and learners are “being fully involved in modern society and the workplace” that “already demands increasingly high levels of digital skill and that will only continue in the future”, (Donaldson, 2015). The implications of subject knowledge can also bring in areas of lack in confidence in teaching ‘out of comfort’ areas, alongside teachers being able to able their means of teaching. Donaldson highlighted

as part of his report on Successful Futures that the implications for teachers and staff in their professional development and training are “the need to extend their abilities in Welsh language, health and well-being, digital skills and computer science, as well as curriculum planning and assessment,” to reach a potentially high level in classroom development through these changes.

When planning to teach at a cross-curricular level to develop the three competencies of Literacy, numeracy and digital competence, it is vital that teachers take into consideration of what our learners want to learn about while also complying with the statutory needs of a curriculum. Within our current curriculum and from personal experience within the classroom, I as a trainee teacher have noticed that many skills of the current Literacy and Numeracy Framework (LNF) as well as the Digital Competence Framework (DCF) are forced into lessons when there may not even be a need for them. As an example of this and as a trainee myself, while planning I would dedicate time into finding or more so forcing reasons to use particular LNF or DCF skills in each and every lesson- personally I would say that this doesn't counteract as effective planning, but rather trying to tick all the boxes to show that everything was being included, when was it really the most beneficial learning strategies for the learners in the end? Where they even able to identify the skills they should be developing in an overloaded lesson where there possibly was no need for the ipads to be used just to say they had been using the DCF? The answer is no, as with a new, wider skills based curriculum coming into action, there is clear instruction that, “schools are not expected to create opportunities for pupils to show their skills in ICT, numeracy, literacy or Welsh in every single lesson,” (Estyn, 2015). When planning to support the use of cross-curricular responsibilities within Literacy, Numeracy and Digital Competence, the new curriculum 2020 sets out within each area of learning how these competencies each contribute in supporting the four purposes set up by Donaldson (2015) developing an onset of skill which become applicable and necessary to create: 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 and healthy, confident individuals, ready to lead fulfilling lives as valued members of society. As well as developing a plan for these four purposes to be the central development for all learners Donaldson (2015) also suggests that these cross curricular responsibilities should be planned for in all teaching aspects to give learners a mindset for wider skills “necessary for modern life and work, that include; critical thinking and problem solving; planning and organising; creativity and innovation and personal effectiveness”. When planning to meet the needs of learners in a fast-moving curriculum such as the current curriculum which is moving towards to new curriculum it is essential that trainees and teachers consider the ideas of their learners within planning. Effective planning as always been a key skills for teachers and trainees as we follow the influences of teaching a subject-based curriculum which dictates what learners must do, however, with planning move forward to co-work with the new curriculum the ideas of our learners are becoming the basis of subject/theme based work focusing on a development of such skills that

coherent the needs of the literacy, numeracy and digital competence. Reflecting on a constructivist learning theory, DfES (2003a) cited within Grigg (2010) references from Every Child Matters that “learners should make a positive contribution to their school lives” and that they have the right to be “entitled to have ownership of their learning”, (Cheminais, 2006). Also within the constructivist theory and the idea of learners being involved in the planning Piaget, cited in Taylor and Harris (2014) “believed that children construct through own knowledge and understanding through their interactions with the environment” also being able to feel their values are met and considered. Through experiential first hand experiences of teaching, by viewing the techniques of different mentors planning strategies it is clear to see the distinctiveness of those who consider the views and ideas of their learners and find the best ways to meet the needs of the learning, compared to those who choose to stay in following the direct links of the current curriculum. As a target within achieving QTS as a trainee, there is clear understanding on how the activities and interests of learners being considered within planning can help to achieve the development of cross-curricular skills across different areas of learning to get the best out of individual learners.

Throughout the changes that are ongoing in our curriculum and the emphasis to draw together these three competencies in developing a fully cross-curricular base for skills across our areas of learning, there is an important call to ensure that while these changes come into place and the ideas of progression, teaching, learning and assessment are changing is that the engagement and involvement of all learners is a priority. Many ways through the Foundation Phase to keep learners actively involved and engaged with work-based activities to construct them through the means of play. Boaler (2009) believed that “playing outdoors leads children to be curious and thus into solving problems”- a mathematical skill that isn’t essentially being omitted to the learners through the idea of work, but instead the use of a problem solving based situation in which natural products are becoming the resources in which the need to learn. Rose (2009) mentioned within Pound, L and Lee, T projects her views of cross-curricular and learner engagement can be provided across the curriculum by giving “opportunities for them to use and apply what they have learned skills bases from the discrete teaching in a subject to controversial”, across a number of areas of learning e.g. the developing skill of problem solving. Also, the engagement of learners can be continued through the idea of play e.g. literacy, numeracy and digital competence can be development through a number of role play, creative and physical/drama related activities. These “creative” means of learning help promote the use of cross curricular activity by allowing learners to take skills they have already learnt, used and to develop them further with by adapting the way they use them in different situations. Such ways of development can account for learning in a “scaffolding” way to continually put into practice a skills base for like and their futures-also make forward steps to Donaldson’s ideas of the four purposes. The implications and limitations that may affect the engagement of learners and their involvement is the idea of new ways of learning. To follow on with Donaldson’s Report (2015) of Successful Futures his

suggestions face us with the idea that the struggles will come from the “aim to create a more interesting and challenging educational experience that will help them to thrive and succeed”- the adaptations of learning will be vital and useful for the futures of our learners but finding the ways to get there through the support of teachers and trainees is an outcome the education system will have to work out together.

Concluding upon the issues discussed throughout this article and the expectation that is to come from all trainees and teaching staff within the education system, it is clear to see that the professional development that needs to be attained is in due course going to become a challenging and experiential platform for all. From previous experiences in working in schools to following on with the training applications that are exposed during personal training sessions, many schools are going to face and undergo the ideal training that is going to support the progression of all learning. In submission to the developing of the three competencies across the curriculum, I feel that as a current trainee the application of these skills are going to be a forthcoming experience in which as new skills are learnt and developed there are going to be more adverse developments to come as we are currently living in a society in which technology is forever changing and we are never going to be fully on top of it. With regards to planning, I feel that the skills of literacy, numeracy and digital competency are going to be easier to support and plan for in regards that the new curriculum alongside the areas of learning are more open to create experiential learning opportunities for all and can draw emphasis on to the fundamental values that Wales wants all learners to experience.

Reference List

- Barnes, J. (2011). *Cross-curricular Learning 3-14*. (2nd edition). London: Sage
- Barnes, J. (2015). *Cross-curricular Learning 3-14*. (3rd edition). London: Sage
- Curriculum for Wales (2022): <https://hwb.gov.wales/draft-curriculum-for-wales-2022>
- Curriculum for Wales (current): <https://hwb.gov.wales/curriculum-for-wales-2008/>
- Donaldson, G. (2015) *Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales* Welsh Government
- Estyn (2015) *Inspection Clarified* (Estyn, 2015, Q22)
- Fisher, D. and Frey, N. and Hattie, J. (2017) *Teaching Literacy in the Visible Learning Classroom*, London. Corwin.
- Gross, J. (2013) *Time to Talk*, Fulton: Oxon
- Haylock, D. and Cockburn, A. (2013) *Understanding Mathematics for Young Children*. London: SAGE
- Kaye, L. (2017) *Young Children in a Digital Age*, London. Routledge.
- Pound, L. and Lee, T. (2010) *Teaching Mathematics Creatively*, Routledge: Oxon
- Taylor, H. and Harris, A. (2013) *Learning and Teaching Mathematics 0-8*, London: Sage
- Welsh Government (2017) *Literacy and Numeracy: Your Questions Answered*. Crown. Cardiff.
Available at: <https://hwb.gov.wales/storage/a625428e-9359-4981-a5a0-5accbc506b9d/literacy-and-numeracy-your-questions-answered.pdf> Accessed on: 12/12/2019