Promoting Cross-Curricular Responsibilities in Key Stage 2

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Introduction

The aims of the research:

- To share practical examples of cross-curricular models to enhance literacy, numeracy and digital competence skills of Year 6 learners.
- To demonstrate the benefits and limitations of implementing cross-curricular models of teaching and learning into schools across Wales.

Why Cross-Curricular?

- Enhance learner engagement and deepen the level of learning (Education Scotland, 2012).
- Literacy and Numeracy Framework and Digital Competence Framework promotes the skills being used across the curriculum (WG, 2013; 2016).
- Donaldson's (2015) vision for the new curriculum and Draft Curriculum for Wales suggest cross-curricular learning should be key in the education of all learners (Education Wales, 2019).

Cross-Curricular Good Practice

- Dedicated day at the end of each term to incorporate pupil voice into future planning (Estyn, 2019).
- Collaborative planning to ensure authentic links between subject areas (Estyn, 2017).
- Working with the local community to support and celebrate cross-curricular projects (Estyn, unknown).

The models below aim to develop **geographical** skills alongside the cross-curricular responsibilities.

Inter-disciplinary Model (Barnes, 2015)

Barnes (2015) argues that the Inter-disciplinary Model aims to:

- Combine learning and engagement through a relevant and purposeful context.
- Promote creative thinking of both learners and practitioners.
- Promote connection making.

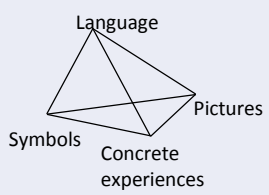

Figure 1: Connections Model (Haylock and Thangata, 2007).

This cross-curricular model is supported by the constructivist view of Haylock and Thangata's (2007) connections model (see figure 1) and further supported by Kolb's (1984, as cited in Aubrey and Riley, 2016) view of experiential learning (see figure 2).

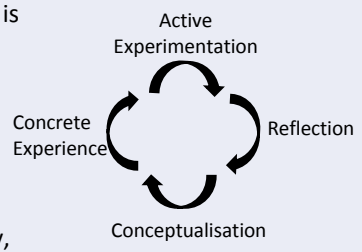

Figure 2: Experiential Learning Theory (Kolb, 1984, as cited in Aubrey and Riley 2016).

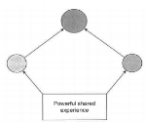

Figure 3: Inter-disciplinary Model (Barnes, 2015).

Presentation

LITERACY Cross-curriculum *

As the task incorporates themes from geography learners will have the opportunity to:

- Use varied and appropriate vocabulary including subjects specific terms and phrases (WG, 2013, p.3).
- Contribute purposefully to group discussion to achieve agreed outcomes (WG, 2013, p.1).

NUMERACY Cross-curriculum **

Learners will begin by creating their own chart to record the weather over the course of a week, developing the following skills:

- Select and construct appropriate charts. .
- Measure and record temperatures.

(WG, 2013, p. 4)

DIGITAL COMPETENCE Cross-curriculum ***

As learners will be asked to create a video presentation of their weather forecast they will be enhancing the following skills:

- Select and combine a range of text, image, sound, animation and video for a selected purpose.
- Ensure output is appropriate for audience.

(WG, 2016, p. 1)

Personal, Powerful Experience

As a result of a workshop with a meteorologist, learners will work in small groups to collect their own data and record a weather forecast for the local area.

* Donaldson (2015, p.40)
** Donaldson (2015, p.40)
*** Donaldson (2015, p.41)

Adopting the Approach

Benefits

- Practitioners can provide learners with a purposeful and relevant experience than allows them to apply and practise a wide range of skills. An ideology supported by Kerry (2015), Barnes (2015) and Dewey (1913, as cited in Aubrey and Riley, 2016)
- Enhanced learner engagement and interest in conducting their own learning resulting in an increased level of learner independence (Education Scotland, 2012).

Limitations

- Barnes (2015) and Robson (2019) highlight how the model requires confident practitioners to be successful as the demands of planning and delivery are more complex than other models.
- Assessment may be difficult as there can be multiple concepts to measure at one time which indicates the importance of ensuring practitioners have the confidence and support to implement the approach as Barnes (2015) suggests it should be limited to two disciplines.

Double Focus Model (Barnes, 2015)

According to Barnes (2015) the Double Focus model aims to:

- Consolidate learning by applying knowledge, understanding and skills to real life contexts.
- Promote a balance between subject focused teaching and cross-curricular learning.
- Promote regular cross-curricular experiences.

The model is supported by Harden and Stamper (1999) who notes Jerome Bruner's Spiral of Learning (see figure 4) which suggests that learners benefit from revisiting concepts to enhance their knowledge, understanding and skills.

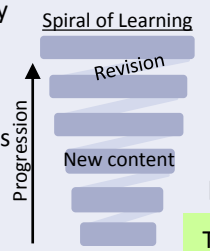

Figure 4: Spiral of Learning Theory (Harden and Stamper, 1999).

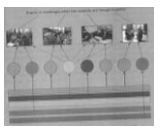

Figure 5: Double Focus Model (Barnes, 2015)

Personal, Powerful Experience

The learning experience will start with a problem:

- Three members of staff cannot find the right holiday for their budget.
- The criteria and budget can be differentiated to support all learners.
- Learners will work in small groups as supported by the social constructivist ideology.
- Learners will be asked to create an itinerary for a weeks holiday including a breakdown of costs.

LITERACY Cross-curriculum *

Learners will be working together to create an informative and accurate itinerary that meets a range of criteria which develops the following skills:

- Contribute to group discussion to achieve agreed outcomes (WG, 2013, p.1).
- Use features and layout to present data and ideas clearly (WG, 2013, p.3).

NUMERACY Cross-curriculum **

Learners will be asked to provide a breakdown of costs and work with a budget which aims to apply the following skills to a real life context:

- Add and subtract numbers using whole numbers and decimals.
- Use and interpret timetables and schedules to plan events and activities and make calculations as part of the process.

(WG, 2013, p. 4)

DIGITAL COMPETENCE Cross-curriculum ***

As learners will be asked to work together to find, analyse and present information they will be consolidating the following skills:

- Ability to identify secure websites
- Work with others to create an online collaborative project for a specific purpose.

(WG, 2016, p. 1)

Adopting the Approach

Benefits

- A balance of focused subject teaching before allowing learners the opportunity to use their new learning an idea supported by Rose (2009).
- Although, Jeya Harish, Kumar and Raja (2012) argue that assessment typically limits the use of cross-curricular learning in schools, the idea of using a cross-curricular model as an assessment tool may indicate that the double focus model is more practical for schools in Wales.
- Differentiation can be a difficult element when planning for an inclusive cross-curricular approach. However, Gumpert and McConnell (2019) suggest creating differentiated problems is one strategy for making cross-curricular learning inclusive which has been incorporated into the example.

Limitations

- Requires practitioners to plan creatively to ensure all areas are given an equal weighting through an engaging and relevant context as Cooper and Rowley (2009) suggest creating links between subject areas remains a challenge for practitioners.

Conclusion

The benefits of implementing a cross-curricular approach to teaching and learning have been showcased through two contrasting models. It could be argued that the two models should be combined as the double focus model relieves pressure on practitioners to teach skills as they arise whereas the interdisciplinary model is arguably the most authentic way of learning. To achieve an effective whole school approach to cross-curricular learning it is crucial that pupil voice, staff collaboration and continual professional development are embedded in the future.

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