MAKING CONNECTIONS WITH GEO-LITERACY

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Adopting a geo-literacy approach can have significant positive effects upon pupils as Iain and Anne explain.

Geo-literacy is about interconnections and the active process of making connections. The National Geographic Education's website states that 'geo-literacy is the ability to use geographic understanding and geographic reasoning to make decisions' (Riska and NGE, 2013). Decision making requires us to make connections with our prior knowledge, with the specifics of each context and with appropriate geo-spatial information. Daily journeys, holidays, shopping lists and use of leisure time require geo-knowledge and spatial information such as location, scale, interconnections and graphicacy. Throughout our lives we make decisions underpinned by geographical knowledge and skills. In order to make effective decisions we need to be able to make connections and appreciate the concept of interconnectivity.

Making connections

Making connections is one of the central features of a geo-literacy lesson. Each geo-literacy lesson begins with discussion and development of pupils' prior knowledge. There is a strong focus on the development of pupils' oral language. Pupils can then make connections with new material, with their reading and with the real world. Other connections that may take place during a geo-literacy lesson include making connections:

- with myself and my prior knowledge
- with other pupils in the class
- with literacy and numeracy
- across the curriculum
- with the geographical topic under exploration
- with my school/and or local community
- with the broader global community.

There is a strong correlation between pupils' oral language and reading comprehension. Furthermore, competent oral language and reading capabilities are important requisites for young geographers, especially from 9 years of age onwards.

In order to be able to read, pupils need comprehensive knowledge about their world. According to Hirsch (2007), 'while it is true that proficient reading and critical thinking are all-purpose abilities, they are not content-independent formal skills at all but are always based on concrete, relevant knowledge and cannot be exercised apart from what psychologists call "domain-specific" knowledge'.

Internationally, in education there has been an increased focus on literacy and numeracy, followed by a marginalisation of other curricular areas including geography. In response to Ireland's low performance in the PISA Survey in the period 2006–09 (OECD, 2010), literacy was identified as a 'national priority' (Department of Education and Skills, 2011). Ironically, the PISA test examined the ability of 15-year-olds from a selection of countries in order to deduce what they have learned and how they apply that knowledge in unfamiliar settings both inside and outside school. This idea of applied knowledge is central to geo-literacy.

Geo-literacy can be used to integrate literacy and geography into other subject areas, to improve learning outcomes in reading and to ease time pressure on curriculum implementation (Burns and Dolan, 2016). Each geo-literacy lesson is constructed around these three concepts: Interactions (How our world works); Interconnections (How our world is connected); Implications (How to make well-reasoned decisions). In response to an overloaded curriculum, declining literacy levels among pupils beginning school and government requirements to increase the amount of time spent on literacy and numeracy, Scoil Íde in Corbally, Limerick, Ireland, has developed a whole-school programme in geo-literacy. Literacy experts acknowledge the importance of the skill being taught through a variety of curricular areas including geography. Geo-literacy incorporates an approach to literacy whereby pupils develop literacy skills through a range of local and global geographical topics and themes. Making connections is an essential part of reading comprehension. Keene and Zimmerman (1997) and Courtney and Gleeson (2010) believe that pupils' comprehension of text improves when they make different kinds of connections:

- text to self (personal connections between the text and the pupil's own experience)
- text to text (connections with other texts that have been read by the pupil)
- text to world (connection between text and wider world/other curricular areas/ life experience of the pupil).

In geo-literacy lessons, text includes maps, graphs, photographs, images and geo-spatial representations of information.

Sample lesson

Pupils aged 11 and 12 (sixth class) had an opportunity to work on maps of London based on the enquiry question: 'How do we find our way around London?' After exploring pictures and maps of London, the students were introduced to Harry Beck's map of the London Underground. They compared it to an overground map of London and highlighted the differences. Groups of pupils were given the following task to complete:

> On your group's next trip to London you will stay in the Chevel Thorney Court Apartments, Hyde Park, 9–11 Palace Gate, London. You need to plan a trip to Wembley Station and Buckingham Palace. Find the Tube station nearest your hotel and plan the route to the two sites. You are required to use the Tube service at all times. You may not use a taxi. Find the Tube stops for your two sites and the cheapest price of a ticket for your chosen route. Each group then presents their work to the class.

The aim of this task is to find the cheapest, most efficient route from the hotel to the two sites in London. The pupils used iPads and each group was given a map of London's Underground (Figure 1). The vocabulary that emerged during this lesson included:

- 'London Underground' or 'the Tube' 'Map of the Tube', 'Tube station'

- '275 stations, 63 in Central London'
- 'Tickets', 'Tube fare', 'Single', 'Return', 'One day return', 'Travel card', 'Oyster card'
- 'Carriage', 'Platform', 'Escalators', 'Ticket barriers' 'Mind the Gap'
- 'Station assistants', 'Inspector', 'Commuters'
- 'Timetables', 'Eastbound', 'Westbound', 'Northbound', 'Southbound'
- 'Change at stations where two lines meet'

During their research and presentations the pupils made the following kinds of connections:

- text to self (personal connections between the text on personal journeys, use of public transport and in some cases, personal experience of the Tube)
- text to text (connections with timetables for public transport in Ireland)
- text to world (connection with London, England, UK, previous visits on holidays).

The group presentations demonstrated enhanced usage of oral language, very good interrogation of the London Underground Map, increased interest in London and informed enquiry questions for further research. Following the group presentations, the pupils discussed the advantages and disadvantages of public transport, including its environmental impacts, as well as possibilities for improving public transport for the Limerick area.

This geo-literacy lesson focused on making connections with the London Underground Map as a text. Connecting with this text helped pupils to become more geo-literate. Because they had a clear task to address they remained focused and actively involved throughout, had a reason for interrogating the text, and were able to consider alternatives through questions such as 'What if we used the Green Line?' As a follow-on activity pupils were asked to plan a weekend trip to London with a budget of £500 to include visits to three tourist amenities. They had to show the price of air fare, travel costs within London, choice of accommodation and details of any tours.

Conclusion

The literature suggests that a weak knowledge base (including geographical knowledge) has a diminishing effect on reading scores. The Arizona Geographic Alliance developed the geo-literacy concept in an attempt to keep geography in primary schools. Their work culminated in a bank of lesson plans (see web panel). In a review of this work, Hinde *et al*. (2007) reported that almost all of the pupils taught geo-literacy lessons made considerable gains in reading achievement, and pupils in middle and higher classes (primary level) showed statistically significant gains in reading comprehension compared with others.

Prior knowledge and experiences play a major role in making connections. All readers bring a unique bank of knowledge and experiences to a text. Geo-literacy helps us to make connections with people, places and geographical concepts through tangible links (such as maps and travel networks) or virtual links via the internet.

References

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Figure 1: Pupils used iPads and a London Underground map to investigate and plan their routes. Photo © Iain Burns.

WEB RESOURCES

Geo-literacy lesson plans: *http://geoalliance.asu.edu/lessons/geoliteracy*

Related lesson plans: *http://education.nationalgeographic.org/*

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