

Orienteering, the map and child development. (Organised outdoor play with maps)

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January, 2017.

Summary

The purpose of the paper is to explore the relationship between engaging children (notably Key Stage 1 and 2) in geographical skills and fieldwork and outdoor play by using orienteering maps. Looking at the conforms of orienteering map design and the principle of outdoor activity encourages the engagement of children. Using a pilot case study of a primary school to explore the engagement of 8-9 year olds to see if the use of orienteering maps and activity encourage geographical skills and outside play. The obesity problem with children means that exploring outdoor activity with geographical skills may make physical activity more engaging.

KEYWORDS: *orienteering, map design, cognitive understanding, outdoor play*

1. Introduction

The purpose of a map is to represent the world in some useful way that can be interpreted and used to guide people to understand and engage with the environment around them. At its worst, map is imperfect and offers its own unique distortion but at its most useful it can ignite the mind to better understand and participate. The inclusion of mapping skills in the Geography programmes of study at key stage 1 and 2 presents a challenge to '*inspire .. pupils (in) curiosity and fascination about the world*' (DoE 2013a p3.) There are a multitude of online mapping tools and technology available to support map design but has a limited use in developing geographical and fieldwork skills. The notion of using a well establish competitive sport such as orienteering, would also fit well with the national curriculum for physical education in the UK. The overall aim for both key stage 1 and 2 is to '*develop competence to excel in a broad range of physical activities, ... engage in competitive sports and activities, lead healthy active lives*' (DoE 2013b p.1.)

There is evidence of an '*epidemic of obesity amongst children (and) ... early life behaviours track into adulthood*' (Cetateanu & Jones 2014; p 68.) Obesity in children can lead to asthma heart and bone issues. The factors underpinning obesity is multifaceted from diet to level of physical activity. The undertaking of physical activity, while on its own will not remedy the problem it can be a part of ongoing strategy to aiding the problem.

Orienteering provides the challenge of using a map so that the child must understand their environment and undertake physical activity through external environment. This paper will explore the relationship and potential benefits between map reading skills and cognitive understanding through engagement with their environment. The experience provides an opportunity for outdoor play through active participation using a structured approach of orienteering.

Orienteering

Orienteering is often discussed as a sporting activity using the orienteering map as a visual tool for aiding participation as the participant uses map reading and interpretation of the physical space with the use of cartographic symbols. The activity requires the person to do this at a running speed (if competitive) and with maps that contain a considerable amount of geographical information (Zentai 2011.) We can use tourist based large scale maps but in the United Kingdom we have some access to Ordnance Survey based maps, although this would have potentially been expensive. The British Orienteering Society notes that orienteering is a suitable tool in schools as it provides a useful means for delivering on elements of the national curriculum, notably in physical education, geography and mathematics. As an adventure based activity it is fairly cheap to set and run and can also be used as a recreational activity for outdoor activity weekends. There is now a British School Orienteering Society that promotes the activity in schools (www.bsos.org.uk 2017.)

Map Design and Orienteering Maps

In terms of map design, orienteering maps have an established standard for their production. This includes colours (black, brown and blue) for topography, yellow for open ground and grey and black for restricted areas (vegetation.) There have been many iterations in the development of map objects and requirements for orienteering map production. The legibility of orienteering maps is important and should take into account the needs of the users' demands. The sport of orienteering is well developed and with the aid of more accurate base maps should enable more accessible and legible maps. By encouraging children to engage and participate in maps they gain the skills around the use and understanding of cartography. Map reading is a basic life skill and allows individuals to think critically and analytically. (Anderson, 2003 and Zentai 2011) The suitability of orienteering map design has taken in the adult approach to the sport and may not necessarily be suitable for children.

The British Orienteering Federation encourages orienteering in schools, but mainly aimed at secondary school level. Challenges for children when reading maps include understanding distance, generalisation, classifications, map transformations, the use of colour and symbology for the object. The increasing availability of maps and geographical equipment requires training and critical understanding (Anderson 2003.)

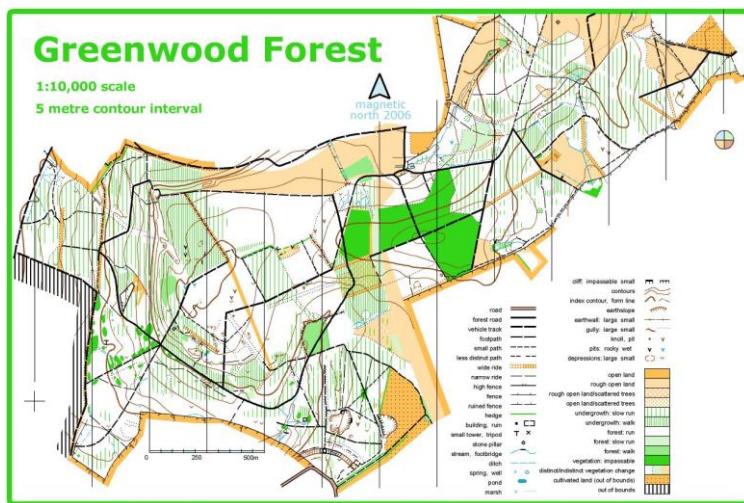


Figure 1 An example of an orienteering map (source: www.BSOA.org.uk 2017.)

In terms of map design, orienteering maps have a different appearance to the more typical typographical map. The location is clear and a relatively simple colour scheme is used to provide block of information on the vegetation. The map symbology requires more explanation with a range of determined and set symbols for specific features such as path and so on.

Outdoor Play and Activity

Children experience and engage with the environment in two different ways, primarily by experiencing it first hand or getting by through using second hand material whether written or through spatial representation such as models or maps (Blades 1989.) Interestingly, the learning about the environment can be self-motivated, deliberate or passive in this context and provides opportunities for this activity to be undertaken without intervention.

Orienteering provides an outdoor geographical game with engagement with the map, GPS, and wayfinders. Geocaching using a GPS and coordinates that are noted on the Internet to locate an items or set of items. A child's use of a map requires them to relate the map to the environment around them. From that map they need to develop their wayfinding skills and navigating the route.

Research Proposal

The importance of orienteering skills in delivering elements of the curriculum at GCSE level is noted on the British Orienteering School Website. It is proposed to study the impact of children engaging with the environment through spatial information using orienteering maps. This would test whether children can discover their own environment and then engage with understanding and reviewing their environmental cognition through establishing which ones they engaged with and why. Wayfinding and then recalling the information and demonstrating their level of understanding.

The short research project would use a case study from a primary school to explore the relationships between map, the child and physical activity. Teaching staff from the school would support the work and ethics approval will be sought at Sheffield Hallam University.

2. Biography

Josie is a principal lecturer in geographical information systems. She is a Fellow of the Royal Geographical Society and The British Cartographic Society. She mainly teaches at postgraduate level in geographical information systems.

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