TEACHING PLACE: DEVELOPING EARLY UNDERSTANDING OF 'NESTED HIERARCHIES'

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Introduction
This chapter relies on the juxtaposition of two disparate texts to explore the teaching of place and the idea of nested hierarchies, to look for reflections and resonance between these interconnected ideas and, in hoping to conflate their respective contributions, to illuminate future approaches of research in this area. The two key texts are those of Harwood (1998) and Deacon (1997), the former focused on approaches to the teaching of nested hierarchies, the latter on symbolic representations in language and learning.

Harwood (1998) reviews different methodologies for the teaching of the concept of nested hierarchies in primary school geography. A clear example of a nested hierarchy, whereby sets of events, places or features are embedded within each other like Russian dolls, is a postal address:

house number is in street, is in town, is in county, is in country, is in UK.

Harwood goes on to develop a 'meta-methodology' in which the teaching and assessment approaches reviewed are arranged along a continuum of sophistication (Harwood, 1998), as illustrated in Figure 1.

Figure 1: A sequence of assessment techniques arranged in order of difficulty (Harwood, 1997, 13)

<table>
<thead>
<tr>
<th>Most difficult</th>
<th>Least difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Arranging and/or drawing symbolic representations</td>
<td>• Discussing models or pictures of familiar locations</td>
</tr>
<tr>
<td>• Verbal tests without cues</td>
<td></td>
</tr>
<tr>
<td>• Pupil’s drawing their own maps</td>
<td></td>
</tr>
<tr>
<td>• Pupil’s shading and marking maps already drawn</td>
<td></td>
</tr>
<tr>
<td>• Verbal tests with cues; eg. multiple choice lessons</td>
<td></td>
</tr>
</tbody>
</table>

In reviewing these methods I provide a critique for their usefulness with children, that is their 'fitness for purpose'. In this context, Cohen and Manion suggest (1985, 42),
“by methods, we mean that range of approaches used in educational research to gather data which are to be used as a basis for inference and interpretation, for explanation and prediction…”

Furthermore, since Harwood himself has approached this in his descriptions of them, I shall go on to examine his continuum alongside a robust model derived from evolutionary linguistics (Deacon, 1997). I do this because the most difficult of Harwood’s strategies he claims to be arranging and/or drawing symbolic representations. Attaining symbolic representations during cognitive development is one of Deacon’s central arguments for human language capability. For the purpose of this article I do, however, uncritically accept Deacon’s model which can be contrasted with that of Pinker (1994) and others (see Deacon, 1997 for discussion) and derives from the work of Peirce (1897, 1903).

**Setting the context**

In the study of geography in primary schools place is a central theme (Scoffham, 1980; Blyth, 1984; Bale, 1987; Foley & Janikoun, 1992; Matthews 1992; Wiegand, 1992, 1993; Palmer, 1994; Martin, 1995; Tilbury & Williams, 1997; Harwood, 1998). This work has a background in Piaget's work (1929) whereby the child is actively trying to make sense of its environment in order to adapt, in biological parlance (Meadows, 1993). Just as all living things must adapt and use a range of strategies and locational placement (Catling, 1998), a mental 'map’, derived from experience, is just one of these adaptive strategies, as developmentally it unfolds with growing experience.

The least difficult category Harwood (1998) identifies as discussing models or pictures of familiar locations. These two concrete props to instruction, models and pictures, could themselves be further divided. Donaldson (1987), reviewing basic tenets of Piaget's work, finds the three dimensionality of modelling quite different from the verbal reasoning approach, which might be called upon to explain a picture. Giving children the experience, for themselves, of modelling a situation (such as hiding from a policeman) allows them to do very well at placing themselves in space and to decentre or to take (literally) another's perspective.

These uses of concrete, or external (ie. non-mental or internalised), teaching aids would seem to correspond to Deacon's (1997) lowest level of representations: the iconic. He describes two more; the indexical and the symbolic, which he describes as follows:

> No particular objects are intrinsically icons, indices or symbols. They are interpreted to be so, depending on what is produced in response. In simple terms, the differences between iconic, indexical, and symbolic relationships derive from regarding things either with respect to their form, their correlation with other things, or their involvement in systems of conventional relationships. (Deacon, 1997, 71)

There is a need to be wary of our use of icon, since Deacon goes on to differentiate his meaning from vernacular usage:

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...What we usually mean is that they were designed to be interpreted that way... for example a striking resemblance does not make one thing an icon of another... similarity does not cause iconicity... it is a kind of inferential process based on recognising a similarity. (Deacon, 1997, 71)

So, while it is conventional to accept models and pictures as iconic, in Deacon's first step to a fully internalised symbolic representation models and pictures are not unless the relationship, in this case between picture and place, is truly inferred by the child. This seems to point to the 'least difficult' end of Harwood's scale as not being least difficult enough. The inference is that there may, indeed, be approaches to the teaching and assessment of place understanding that are yet less difficult, and, perhaps, more suited to younger or less experienced children. If so what are they? Two are suggested. One is first-hand fieldwork, involving gross motor learning (Donaldson, 1987), to which can be added a second, the immediate production and manipulation of images (including sketching: Bartlett, 1999; Martin, 1999; and digital photography, Storey, 2002), alongside this physical exploration of space, direction and distance. In the new curriculum for the youngest children in schooling, set out in the Early Learning Goals - Knowledge and Understanding of the World (DfES/QCA, 2000), this is implied in

adult support in helping children communicate and record orally and in other ways. (QCA,1999, emphasis added)

The intermediate level of Deacon's (1997) route to symbolic representation, indexical relationships derives from the first iconic layer. This would seem to be aligned with the median of Harwood's (1998) levels of difficulties, ie.

- pupils drawing their own maps
- pupils shading and marking on maps already drawn

Here there is the possibility of some semantic confusion, because map symbols used ordinarily appear more like icons as generally used in the vernacular. But here the argument is for treating them, in Deacon's (1997) terminology, as indices of geographical experience. According to Deacon's scheme, indices are constructed from iconic representations, but the relationship is not a 1:1 relationship but an interpretative relationship. This means that the child's mental processes take the icons as data and rework them into the next level of analysis.

Indexical reference, however requires iconic reference. In order to interpret something as indexical, at least three iconic relationships must be also recognised. (Deacon, 1997, 79)

So the properties of the icons built into experience can be drawn upon as the data for further reworking. In this respect the experiences of children in

- drawing their own maps, and
- shading and marking on maps already drawn,

would seem to fulfil similar criteria. If the children are truly capable of using maps in this respect, they
are drawing upon earlier icon-building experiences (such as gross motor play and investigation, representations of experience through talk, drawing and modelling) and are able to bring these to bear upon the map-work (during construction, coding, 'reading' and interpretation), as Harwood's two median categories imply. In drawing upon these earliest icons, the resulting map-work does not easily correspond point-for-point to the earlier experiences but is a reworking and synthesis of them. In this respect, as measured against Deacon's (1997) scheme, Harwood would seem to have placed them in the correct sequence of temporal (pupil age) order and pedagogic demand.

Finally, Deacon's (1997) third and ultimate category of representations is the symbolic. In Deacon's (1997) terms, symbols derive their powers of representation from the indexical level but only transiently. Symbols (i.e., in linguistic development 'words') derive their initial representative power from the learning of individual symbols attached to indexical clusters of icons. As such they are rooted (and routed) from direct, concrete experience. But this relationship is transient while the symbolic system is being built. The relationship serves to 'scaffold' (Vygotsky, 1962) the formation of sufficient symbolic capability until a threshold is reached. Thereafter true or complete symbolic representation is achieved because now the symbols are defined purely in terms of each other, as indeed words are defined lexicographically without (in the use of a mature user of the 'system') recourse to direct experience.

New symbols can be added to the lexicon by mapping them (linguistically) into relationships with existing symbols. Returning to Harwood's (1998) two ultimate categories:

- arranging and/or drawing symbolic representations, and
- verbal tests without cues,

it can be suggested that they be reversed. What Harwood (1998) means by symbolic representation, that is using shapes to stand for countries (a 'spatial test'), is, as discussed above, equivalent to the indexical level of pictograms on maps. He assigns the level of difficulty by comparing results with a verbal test.

Performances in the spatial test were much inferior to the verbal test. Nearly 75% of the children, who had been able to state correctly that Glasgow is in Scotland did not demonstrate this in the spatial test. (Harwood, 1998, 13)

I would suggest that to be able to state that 'Glasgow is in Scotland' but not to demonstrate this with concrete shapes contradicts the logic of his earlier scheme. The shapes do not approach the same level of symbolic representation as words because in this sense they do not define each other as Deacon suggests they should but, instead, are defined by criteria external to their use (probably labels since they were geometric and not map-like). They are not symbols but crude icons used symbolically without the scaffolding (given their appearance as rectangles and circles) or arbitrarily (as with letters and sounds in speech/writing) to cross the threshold to full symbolic representation.
Why then was the 'verbal' test eliciting a higher score? 'Glasgow is in Scotland' could just as easily operate at an iconic level, as a rote learned tag or label without, again, the relationship between Glasgow and Scotland being defined at either of the superior indexical and symbolic levels of representation. Without the eternal philosopher's question, 'It depends what you mean by......', applied to this phrase, we cannot know that its users are indeed understanding the nested relationship, that is, what it means to those who do. One other method in the proposed ranking, the verbal tests with cues, such as multiple choice questions, would seem to be far too low in the scheme to fit with this interpretation unless the 'cues' themselves (uncategorised by Harwood, 1998) are the criteria to be taken into account when establishing the rank order. This category is, it would seem, a subset of the verbal tests and more work could be directed to defining cues and categories of questions according to what they refer in this or any other scheme and so to decide whether and how they should be respectively ranked.

The purpose so far has been to attempt to provide a unitary if not unified framework to set practical studies against and, in doing so, to have illuminated Harwood's (1998) scheme in a way that otherwise would not be possible. This has provided a fresh look at his scheme and suggested sufficient areas for it to be reviewed. Thus the emergent continuum of 'meta-methodology' by which pedagogic devices (teaching methods) are ranked in order of difficulty still holds true, and teachers (Harwood, 1998, 13) can still;

...start with the assessment method which they think is most likely to challenge the pupils and then gradually simplify or complicate the process until the child's level of competency is identified.

But my analysis suggests this ranking is not linear. In two places thresholds need to be crossed and moving from one to the next may not be the same sort of step as between two others.

A practical study
In the National Literacy Strategy [NLS] framework for teaching (DfEE, 1998 p61), the inclusion of teaching about a 'pupil's name and address' is listed along with 'high frequency words to be taught as sight recognition words through YR to Y2', that is from Foundation Year 2 [age 4-5 years] (QCA, 2000) to the end of Key Stage 1 [age 5-7] (DfEE/QCA, 1998). Implicit in this NLS requirement is teaching an understanding (through an address) of the concept of nested hierarchies. Harwood (1998) noted that this is 'an important objective of primary geography... ', in terms of teaching

... young children that places exist in a nested relationship, in which smaller places are located inside larger places... (Harwood, 1998, 12)

Harwood's conclusions point to a developmental and maturational period throughout primary schooling that allows these relationships to be appreciated by children as they approach the age of
eleven. While the NLS states that young children should develop a knowledge of the words involved, it would seem that there is little worth in this learning if no development of the idea of nested hierarchies also is involved. In that Harwood infers that the end of Key Stage 1 would be too young to expect this understanding, what can young primary age children understand? This question is the focus of this study.

Harwood (1998, Harwood & McShane, 1996) identifies the approaches used in his studies as

- verbal tests without cues
- pictures and models of familiar situations
- mapping activities
- use of symbolic representations

While all of these approaches have their particular uses, they can also be criticised in relation to age-related appropriateness and usefulness. With younger children the context of a study is important, in that the tasks used should relate to areas of their experience, in order to provide the opportunity to investigate what they might know or understand. Interpreting some of Harwood's strategies for younger children was important.

The study group comprised eleven children, all in Year 1 [5 to 6 years of age], in a mixed-age class with a Reception cohort. These children formed the basis for a larger investigation (Storey, 2002), of which this study was part, and which describes more fully the general nature of this research, the methodology (enquiries embedded in the ongoing curriculum) and the children's familiarity with being observed and the questioning that was engaged in.

The nested hierarchy of an address was implicit in the repetitively structured language of a familiar children's picture book, Funnybones by Janet & Allan Ahlberg (1980). This book (and others from the series) had been used with the class for work in Literacy. All the children were familiar with the 'cascading' sequence of language, even by rote, from class, small group, paired and (where possible) individual readings. This text provided the research opportunity, using the familiar, to explore the children's appreciation of the relationship of the parts of the 'address' form used in the Funnybones picture story book.

The approach undertaken was to develop a number of classroom activities that focused on the key elements of understanding the nested hierarchy relationship: the sequencing of the elements of the 'address'. In the activities the links between the normal, linear relationship of written text in a book (or as listed in the address on an envelope) and the conceptually different 'nesting' of geographical entities this describes, was explored in a series of concrete manipulations. They were based on the text (familiar to the children) initially, then on the use of pictures and drawings. These manipulations were designed to allow children to arrive at the latter, more sophisticated and geographically useful formulation from the simpler and more instrumental former one. The activities evolved in a formative
way from the assessment of the success of each activity as the children progressed. They were undertaken as individual activities.

**Figure 2:** Sequencing pictures and text

![Activity 1: The children were given copies of the initial 'paragraphs' from Funnybones (words and picture) in random order and asked to reassemble the opening sequence (Figure 2). They were then asked to retell the story. The purpose was to see whether the children recognised and could replicate the pattern of the story.](image)

**Activity 1:** The children were given copies of the initial ‘paragraphs’ from Funnybones (words and picture) in random order and asked to reassemble the opening sequence (Figure 2). They were then asked to retell the story. The purpose was to see whether the children recognised and could replicate the pattern of the story.

**Activity 2:** In this follow-up activity the children were given enlarged copies of the pictures in the story to create a sequence or collage showing the order and relationship of the ‘places’ in the tale. This was to be done by cutting out and re-arranging the various ‘places’ in the story. The purpose was to provide an opportunity to reinforce the linguistic ‘prop’ of the underlying geographical concepts. During this activity a semi-structured discussion was used to elicit from the children their reasons for placing the pictures in the order they did so. The intention was to try to distinguish between the children’s reliance upon the literary structure of the text, story and illustrations, including their reading of captions if any-the reason for choosing to approach this topic via the possible scaffolding of the nested hierarchies by the story’s opening, and any possible geographical concepts that might be emerging.

**Activity 3:** This activity involved creating a self-drawn collage of the separated elements of the hierarchy to allow the elements of ‘place’ to be rearranged. The purpose was to see whether the children could demonstrate an understanding of the intrinsic hierarchy of ‘places’ in the story. The activity was designed to round-off this series of tasks by allowing the children physically to place representations (drawings in white pencil on black paper) of the features in relation to each other (by eg. sticking the skeletons inside the cellar and the cellar inside the house). This allowed some direct semi-structured questioning around the issue of the nested relationships of the parts to each other and the whole.

In Harwood’s continuum these approaches seem initially to fall into the ‘least difficult’ end of the range, being, as it were, concrete manipulations of a ‘model’ of the address of the skeletons. Linguistically,
pictures and text, enter into indexical and symbolic representations of experienced reality (Deacon, 1997) and may need to be reconsidered in this respect.

There were a number of outcomes from the three activities.

**Activity 1:** This sequencing of the story text was achieved by all the children, whether they were formally able to read the text or not, and all were able to re-tell this part of the story. For example, one child explained:

“There's a dark hill where the street is and there's a dark house in the dark dark staircase and down the dark dark staircase there was a dark dark cellar. Because there's a hill with a street on it and there's a house in the street and in the house there's a dark dark staircase there was a dark dark cellar. And I know skeletons live there because they like the dark.”

Here, the first two pictures were initially placed in the wrong order and then corrected,

“because I just did I thought about it for a minute and remembered how the story went. The hill is the biggest, then the street, then the house, then the staircase and then the cellar.”

This example is one of the more full responses and captures the linear sequence set out in the child's own reformulation of the Ahlbergs' patterned structuring of the opening to the story. The rest of the group essentially arrived at a similar, structured relationship with a re-telling of this part of the story.

**Activity 2:** The children were given the photocopies and allowed to do as they wished in ordering them. All the children remembered the previous work and all either stuck the pictures in a linear sequence directly or asked if they could do so, without prompting. If the sequence was not correct then the child were asked to look again and say if they were happy that this was the sequence. Finally, the children were asked to say why they had chosen that arrangement and how they had done it.

After the sequence was established, the questions used to probe the geographical and locational issues were:

- why does this one come first?
- which one is the biggest place?
- where does this one fit in?

They were applied to whichever sequence the child had created.

The majority of the children did not intuitively make the connection between the literary scaffolding that accommodated the representation of a nested hierarchy and the explicit description of the nesting. Further comments are noted in Figure 3.
Activity 3: Initially, the children used their drawings to recreate the illustrations. However, they were then encouraged to cut them out and stick them together so as to make an overlapping collage in which the 'nested' element of the sequence could be physically demonstrated. Eight of the eleven children were able to move from a purely linear conception of the skeleton's address to a form of 'nested' representation (Figure 4). A more detailed outline is given in Figure 3.

Figure 3: Comparative outcomes from activities 2 & 3

<table>
<thead>
<tr>
<th>Child</th>
<th>Activity 2: Sequencing the photocopies of features</th>
<th>Activity 3: Creating a collage of drawn features</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>Sequence completed using illustrations</td>
<td>Linear arrangement maintained overall but skeletons moved forward earlier in sequence to align with cellar and house [*]</td>
</tr>
<tr>
<td>AK</td>
<td>Sequence completed using illustrations and text</td>
<td>Linear sequence maintained to establish relationship and could describe this [+].</td>
</tr>
<tr>
<td>LS</td>
<td>Sequence completed using illustrations and text</td>
<td>Linear arrangement limited to the street and the skeletons clearly moved to positions under houses where the cellar would be [*].</td>
</tr>
<tr>
<td>JB</td>
<td>Sequence completed using illustrations</td>
<td>Stairs, cellar and skeletons moved inside and overlapping one of the drawings of the houses [*].</td>
</tr>
<tr>
<td>SB</td>
<td>Sequence completed using illustrations</td>
<td>Maintained linear sequence and did not add any overlapping qualities [#].</td>
</tr>
<tr>
<td>AB</td>
<td>Sequence completed using illustrations</td>
<td>Arranged pictures in a vertical rather than horizontal sequence to demonstrate the nested arrangement of the elements and could explain this [*], [+].</td>
</tr>
<tr>
<td>SG</td>
<td>Sequence completed using illustrations and text</td>
<td>Stairs, cellar and skeletons moved into overlapping relationship and could explain this [*], [+].</td>
</tr>
<tr>
<td>TC</td>
<td>Sequence completed using illustrations and text</td>
<td>Drawings arranged as the sequence not revealing the nested arrangement but could describe nesting verbally [+].</td>
</tr>
<tr>
<td>Group</td>
<td>Activity Description</td>
<td>Comments</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------</td>
<td>----------</td>
</tr>
<tr>
<td>FS</td>
<td>Sequence completed using illustrations</td>
<td>Broadly repeated the linear sequence but not so accurately and did not add any verbal indication of understanding a nested arrangement [#]</td>
</tr>
<tr>
<td>RC</td>
<td>Sequence completed using illustrations and text</td>
<td>Persisted in the linear arrangement but was able to explain the nested relationship [+]</td>
</tr>
<tr>
<td>ES</td>
<td>Sequence completed using illustrations</td>
<td>Showed the skeletons out of sequence and fitting into a house but could not explain any further [#]</td>
</tr>
</tbody>
</table>

**Activity 2 Comments**
All the children were able to complete the sequence. There were no restrictions due to the manual skills required to cut, stick and assemble the sequence.
The use of illustrations and/or text to order the pictures follows an expected correlation with individual reading skills and proclivities at this time. All children, additionally, relied upon saying (often chanting) the opening passage and all could independently 'read' the text to an adult from prior familiarity. There was no overt expression of the nested arrangement of the sub-localities within the opening of the story and all appeared to be relying upon the linear sequence.

**Activity 3 Comments**
The activity allowed the previously linear outcome of the sequencing to be relied upon and then elaborated either practically or verbally to indicate the understanding of any nested relationships.
The previous collage using photocopies introduced the idea of possibly rearranging the pictures to express further ideas of the text. It was more flexible in that it allowed a majority of the children to progress toward the appreciation of the nested arrangement either by pictorial [*] or verbal [+] means. Three [#] could not be said to have progressed this far.

**Figure 4:** Drawn collages of the opening sequence of Funnybones
Discussion

Clearly, when we consider Harwood's (1998) developmental sequence – however it might be modified for younger pupils – the recitation of an address by a child aged between 4-7 years is, of itself, unlikely to mean that they have any internalised geographical conception of the nested arrangement of places within places, which adults would accept without question. Yet, it appears that the teaching activities described here have, to some extent, enabled a majority of the Year 1 children to begin to approach this conceptually difficult aspect of learning. Reciting their address would seem to be instrumentally supportive initially in helping young children, Literacy Strategy notwithstanding, but it is not sufficient to be left unexplored if the nested hierarchy idea behind an address is to begin to be understood. However, the more elaborate sequence of activities outlined above, in terms of pedagogic efficiency, may not fit easily into the Year 1 curriculum, a matter which needs to be addressed for true geographical learning to develop effectively.

One way forward, using Deacon's (1997) scheme and the concomitant argument that has been developed, is to extend Harwood's (1998) continuum of teaching and assessment methods and to reconstruct it as shown in Figure 5. A further point emerges from this thinking about methods themselves as being ranked in a hierarchical 'meta-methodology'. At any point along the continuum the child/learner can be asked to comment upon or consider the methodology being used. Harwood (1999) does not consider the degree to which meta-cognition may develop along this series. While this aspect may be what Leat (1997) describes as over-used, nonetheless, for children, learning for most children is helped by clear and focussed help, particularly if they are helped to reflect upon their own thinking (Weedon, 1997). The value of this lies in:

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"...helping children to be conscious of what they know and can do and then teaching them how
to draw purposefully on that knowledge and to deploy it when working on problems."  (Knight,
1993, 35)

Deacon (1997) argues that even at an early age, in their language capabilities young children have
crossed the threshold for symbolic linguistic representation. This occurs before children enter formal
schooling and are engaged in geography or any other curriculum subject. Children, coming into the
curriculum, already have the symbolic tools to engage in thinking about thinking from the very
beginning of the range of activities to which they will be exposed. To engage them with the processes
of their learning in this way, at whichever level of teaching and assessment, has the potential to make
available their already considerable capabilities in symbolic representation. In such a pedagogic
scheme, symbolic representation is the ultimate goal for subject-based knowledge and skills, enabling
integration across the learners' experience by virtue of untying them from the limits of concrete, iconic
experience. As such, symbolic representation becomes available for reordering learning in novel ways
that allow personal and socially recognised progress.

**Figure 5**: Harwood's hierarchy of pedagogic methodologies redrawn.

<table>
<thead>
<tr>
<th>Harwood's original continuum (Harwood, 1998)</th>
<th>Redrawn scheme</th>
<th>Deacon's levels of representation (Deacon, 1997)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Most difficult</strong></td>
<td><strong>Most difficult</strong></td>
<td><strong>Most sophisticated or mature</strong></td>
</tr>
<tr>
<td>• Arranging and/or drawing symbolic</td>
<td>• Verbal tests without cues/verbal tests with cues, eg. multiple choice questions</td>
<td>• Symbolic -area of overlap where 'thresholds' are crossed</td>
</tr>
<tr>
<td>representations</td>
<td>• Arranging and/or drawing pictorial representations</td>
<td>• Indexical -area of overlap where 'thresholds' are crossed</td>
</tr>
<tr>
<td>• Verbal tests without cues</td>
<td>• Pupil's drawing their own maps</td>
<td>• Iconic</td>
</tr>
<tr>
<td>• Pupils' drawing their own maps</td>
<td>• Pupil's shading and marking maps already drawn</td>
<td></td>
</tr>
<tr>
<td>• Pupils' shading and marking maps</td>
<td>• Discussing pictures of familiar locations</td>
<td></td>
</tr>
<tr>
<td>already drawn</td>
<td>• Gross motor play, investigation and modelling</td>
<td></td>
</tr>
<tr>
<td>• Verbal tests with cues, eg. multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>choice questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discussing models or pictures of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>familiar locations</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Least difficult</strong></td>
<td><strong>Least difficult</strong></td>
<td><strong>Simplest or least mature</strong></td>
</tr>
</tbody>
</table>

http://www.geography.org.uk/eyprimary/primaryresearch/researcharticles
Conclusion

For the purposes of teaching geographical understanding, however, there has been value in investigating the intertwining relationship between language, literature and the learning of the geographical conceptions of nested hierarchies. Children are more sophisticated learners of language at ages rather earlier than schooling attempts to inculcate broader concepts about the world. They have the foundation for tackling more sophisticated and challenging ideas than is usually recognised, based on scaffolding learning in the way that the activities used in the study above show can be undertaken, a potential in relation to learning through language well discussed elsewhere (Daniels, 2001). Linguistically, children may be capable of operating at a quite sophisticated symbolic level (Deacon, 1997) though day-to-day teaching seems to rely - inhibitingly - over much on more explicitly concrete experiences. Indeed, since young children, as language users, are already juggling symbols, grammar and meanings in attempting to understand their world, perhaps those showing understanding through the third of the activities used in this study are indicating a greater level of symbolic sophistication than is recognised. But perhaps more interestingly still, arising from this study, might there be greater opportunity for common ground to be attained and greater understanding to be attained by young children in reading symbolic texts of all kinds, whether they be books, maps, musical scores or algebraic formulae?

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