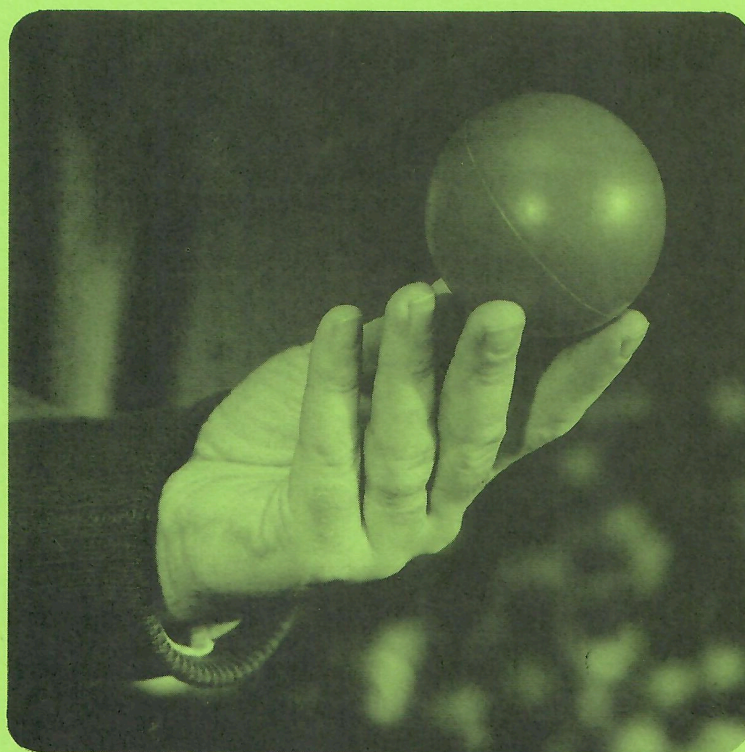


Royal National Institute for the Blind

Objects of Reference

Promoting concept development and
communication skills with visually impaired
children who have learning difficulties



Adam Ockelford



RNIB
challenging blindness

Foreword

From an early age, children who can see come to accept that everyday objects, people and activities can be represented symbolically, through photographs, paintings and drawings, and, later on, the written word. In the absence of vision, this aspect of learning, whose preliminary stages most of us grasp intuitively and quite take for granted, may have to be taught systematically. One teaching method, in which objects are assigned specific meanings, is outlined in this pamphlet.

Such an approach has much to offer visually impaired children who have learning difficulties. Their understanding of everyday life—what is going to happen, where, when and with whom—can be enhanced substantially; and the children's ability to communicate with others, particularly where expressing preferences is concerned, can be heightened. Improved understanding and the capacity to make wishes known can lessen feelings of uncertainty and anxiety, and thereby reduce the incidence of challenging behaviour.

The system described here is by no means original, being well-established in the education of deaf-blind children, nor is it exclusive: Objects of Reference may be used to reinforce other methods of learning and communication.

Throughout, the aim has been to present ideas in as straightforward a manner as possible, and it is hoped that the material will be of interest to professionals and parents alike.

Acknowledgements

I would like to thank the many people who have assisted in the production of this booklet, most notably William Green, Olga Miller, Robert Orr and Mary McDonald, and I am especially grateful for the insights offered by Paolo Verciani and Claire Shepherd.

Photography: Robert Maidment-Evans, Linden Lodge School, Wandsworth.

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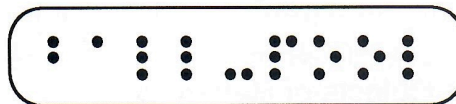
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1 What are 'Objects of Reference'?

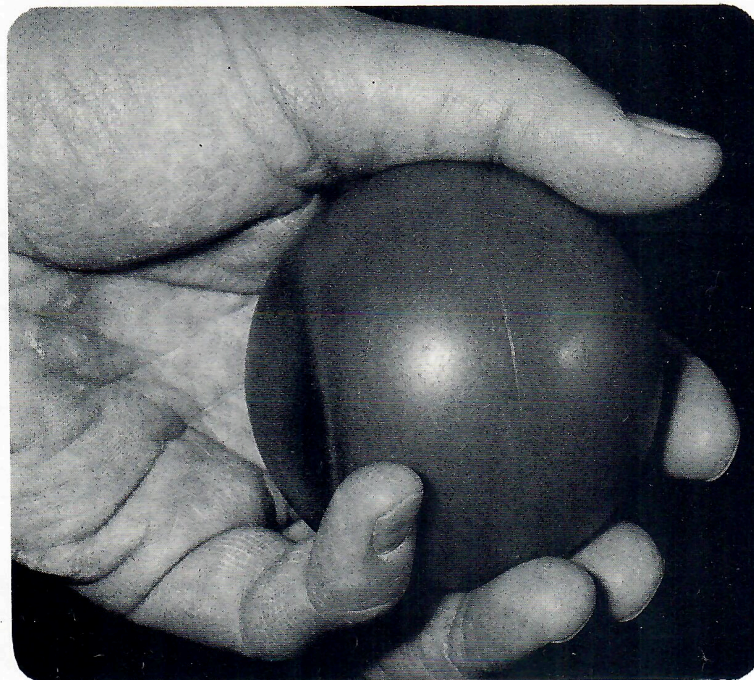
Quite simply, Objects of Reference are objects that have special meanings assigned to them. They *stand for something*, in much the same way as words do. For example, whereas a literate partially-sighted child may take a sign such as this

ball-pool

and a blind child a raised version of these braille dots



in each case to mean 'ball-pool'; a child who could not read or write may take a plastic ball (from the ball-pool) to mean the same thing.



Plastic ball meaning 'ball-pool'

2 What can Objects of Reference represent? Objects of Reference can be made to represent anything that words can. In using Objects of Reference with children, I have found it helpful to think in terms of 'concept groups' such as the following:

● **Activities** Here, the object will often amount to the same thing as the item used in a given activity, such as

drink.....represented by a cup or mug

something to eata spoon

swimminga piece of towel

ball-poola plastic ball



Cup meaning 'drink'

● **Places** Such as

classrooma little bell, stuck on the door

homethe key to the front door



Key meaning 'home'

● **People** Who may be represented by, for example, a particular wrist-band or piece of material from which a familiar item of clothing is made.



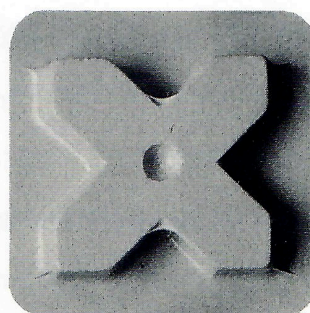
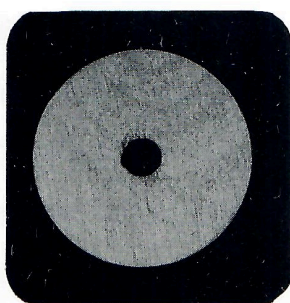
Bracelet meaning 'Anna'

● **Times** These are bound to be abstract—at least, as far as the child is concerned. For instance, I have used a little plastic watch to mean *4 o'clock* (when some children go home, others have their tea, and the rest go out to play).



Plastic watch meaning '4 o'clock'

● **'Qualifiers'** So-called because they qualify other objects. Included are concepts such as *yes* and *no*, *more* and *finished*. Again, these are sure to be abstract.



Wooden shapes meaning 'yes' and 'no'

3 Why use Objects of Reference? Objects of Reference can be used in many of the ways that reading and writing can. Three main reasons spring to mind:

- **To help remember things** People write things down to help them remember things. Can you manage without a shopping list, for example? Think of address books, diaries and timetables. We use them because we don't feel able to rely on memory alone.

- **To understand things better** Do you ever think difficult ideas through on paper? Consider this booklet. Does seeing the whole thing laid out, and being able to read and re-read it yourself, make the concepts easier to grasp than just listening to someone reading the text aloud?

- **To communicate with others** From a note to the milkman to a postcard home, being able to read and write enables us communicate with others.

4 Which children are likely to benefit from using Objects of Reference?

The children most likely to benefit from using Objects of Reference are those who are

- **visually impaired**—or have problems interpreting what they see;

and for whom

- **large print, braille or Moon (an alternative tactile reading system) are currently not appropriate options**—although learning to use objects symbolically may make these forms of literacy more accessible.

Objects of Reference have been used with deaf-blind youngsters for some time, and increasingly they are playing an important role in the education of visually impaired children who have other disabilities. Their potential value for able young pre-brailleists is still to be assessed properly. Moreover, it could be that people of any age who have degenerative conditions such as *Alzheimer's* disease could be helped to use their remaining faculties more effectively through the appropriate, and sufficiently early, introduction of Objects of Reference.

It is worth bearing in mind that children with sufficient sight may be able to use pictures instead of objects, or to graduate onto pictures from objects.

5 What skills and understanding need to be developed in order to use Objects of Reference? To make effective use of Objects of Reference, the child will need to develop:

- **The ability to discriminate objects by touch** (and perhaps with a limited amount of vision)
- **An appreciation, at some level, that an object can *mean* something**
- **The capacity to remember that a given object has a particular meaning**

When starting to use Objects of Reference, these qualities need not be present, or may exist only in rudimentary form. However, a programme that uses object symbols will actively promote their acquisition.

6 How can Objects of Reference first be introduced to a child? The way in which Objects of Reference are first introduced depends on a child's level of language development.

- **If he or she has sufficient receptive language** then a verbal explanation or sign can accompany the introduction of the first object. For example, the person working with the child may say: "This cup means 'drink'", whereupon the cup is presented, followed immediately by the drink. Such an explanation and accompanying action may be repeated as often as necessary for the child to grasp the connection.

- **If a sufficient level of language has not yet been acquired** then the teacher or carer will have to rely on the successive presentation of an object and that which it represents. This action may need to be repeated many times, over an extended period, before the link is made in the child's mind. Here, consistency is particularly important.

In either case, the ultimate aim is for the presentation of the object to trigger the thought of the activity, place, or person that it stands for. Then it will have become for the child an 'Object of Reference'. Here are some tips for starting out:

- **Take account of any strong interests or preferences the child may have** If the child's favourite thing is chocolate milkshake, then you may decide that the first Object of Reference chosen should refer to this.

- **Select an object that is as characteristic as possible, and that the child will find attractive** Choose an object that is easy to recognise by touch. It is important that the child should find the object attractive, should *want* to feel it and to 'own' it.

- **Make sure, at first, that there is the simplest possible link between an object and its meaning** It may be wise to start with a simple 'concrete' object that has a direct physical connection with that to which it refers. Examples include a cup for 'drink' and a spoon for 'food'.

However, this principle may well not apply in all cases. The strong motivation to understand or express a more abstract thought, such as 'home time', or the particularly pleasing feel (and perhaps appearance) of an object may be more important factors as far as the child is concerned.

7 Moving on Following the successful introduction of the first Object of Reference, there are various ways forward, which are outlined in the paragraphs that follow. Whilst some of the suggestions may be appropriate for a particular child, others may not be. Progress may be made on several fronts at once, or in only one area at a time. The ideas may be taken up in any order, and not necessarily the one presented here.

(a) Introducing further Objects of Reference Having grasped the meaning of one Object of Reference, something which may occur almost immediately or take many months of effort, further objects may be introduced. Several factors may be taken into account as this next stage is broached. For example:

- **Contrast** Initially, it may be wise to select objects that are strongly contrasted both in texture, shape, colour (where appropriate) and intended meaning. In this way, possible confusion with other Objects of Reference will be kept to a minimum. Gradually, it may be possible to use objects that are less characteristic to touch—whose salient features are less clearly defined.

- **Motivation** Until Objects of Reference become a source of motivation in themselves, which will hopefully occur as the child comes to appreciate his or her new-found understanding and control of the world around, teachers and carers should continue to bear in mind any particularly strong likes or dislikes. What is it that the youngster would wish to think about, to 'read' about, and to communicate with us about?

- **Degree of abstraction** As the child reaches the necessary level of understanding, objects that are more abstract may gradually be introduced, that have less immediate physical connection with what they represent.

(b) Reducing and simplifying each object In time, it may be possible to reduce or simplify some or all of the objects that a child uses. There are two reasons why this may be desirable:

- **To save space** Life-sized objects may be space-consuming and awkward to manage, particularly if the child builds up a healthy vocabulary!

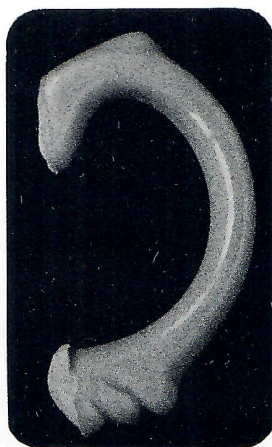
- **To promote learning** There are educational benefits (which are described on page 13).

Objects may be reduced in size or simplified or both.

- **Reduction** Take, for example, the ball from the ball-pool shown on page 2. This may be replaced by one that is slightly smaller, and later by one that is slightly smaller still, and so on. Beware of just reducing objects in size, though, and thinking their equivalence will be maintained for visually impaired children. For instance, to the touch, a small model car bears little or no resemblance to the real thing. Miniaturisation along

these lines, which is very much a visual thing to do, may be quite inappropriate for blind children in the early stages of learning. It may be much better to represent travelling by using part of the vehicle with which the child has regular contact. So a good way of representing 'going in the minibus', for example, may be to use a seat-belt buckle.

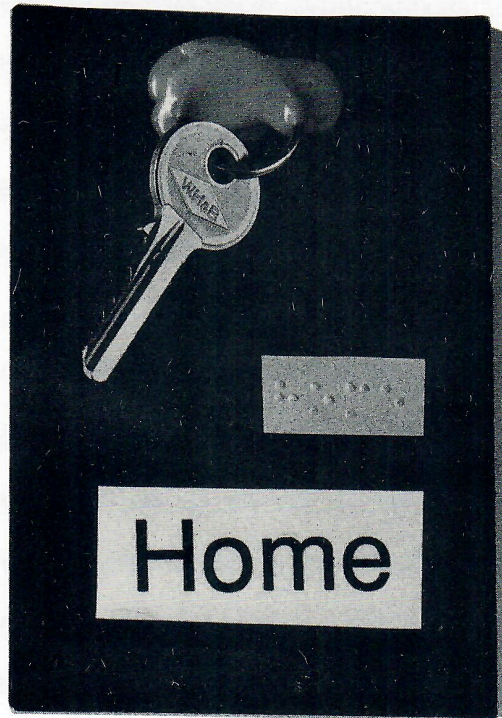
● **Simplification** This has two main stages. First, those working with the child must discover the features that are being used to identify an object, and then gradually eliminate those characteristics that are judged to be of lesser importance. For example, a child may have a cup to mean 'drink'. How is the cup being identified? By the rim? The handle? If so, can the rest of the cup be removed, and still be accepted by the child as meaning 'drink'?



Cup *handle* meaning 'drink'

Later, it may be possible to simplify the remaining features. For example, the cup handle could be replaced with a plain semi-circle.

As objects are reduced in size and simplified, it will be possible to stick them on card. If this is the aim, as the objects are modified over time, it is sensible to move towards a two-dimensional representation. Of course, with some objects, no modification will be necessary.



'Home' card, using an object, braille and large print

By constructing cards like this, objects can eventually be presented in the form of a book, which offers a convenient medium for their storage and use. It is also brings Objects of Reference one step nearer to reading, in the conventional sense.

Finally, the objects, simplified and reduced where necessary, can be copied through 'thermoforming'. This is a vacuum-moulding process, in which a thin sheet of plastic is heated and sucked over the object in question, imitating its every contour.



Thermoformed key meaning 'home-time'

In this way, Objects of Reference can be 'mass-produced' fairly easily, and, again, it brings the child closer to reading braille or Moon. Indeed, there is no reason why an object should not eventually be transformed into a suitable braille or Moon character. For instance, a simplified form of the cup handle shown on page 11 may be interpreted as 'd' for 'drink' in Moon.

The educational benefits of undertaking programmes of reduction or simplification can be enormous, with the insights they offer into the way a child thinks. Just how far can a ball from the ball-pool be reduced and still be accepted as a representation of the original? To what extent do successive reductions have to be graduated for object equivalence to be maintained in the child's mind? So often it is at the point where things appear to break down—upon discovering, for example, a child will not accept that a thermoformed key can stand for the original thing—that the learning process for teachers and carers really begins, and future individual programmes can be planned with precision. We need to know just where a child is currently standing in order to get a glimpse of the next step along the developmental path, and foster this progression.

(c) Separating the Object of Reference from that to which it refers The Object of Reference may gradually be separated further and further in time from that to which it refers. So the ball for 'ball-pool' may be presented together with an indication of "in a minute", for example. The activity then occurs after the prescribed time, a period which may slowly be extended as the child comes to accept the new concept. In this way, the objects can be used in an increasingly abstract manner.

(d) Sequencing using Objects of Reference; making timetables Having separated the object from that to which it refers, the child can next begin to anticipate sequences of events, starting perhaps with two. For example:

"After the ball-pool, we'll have a drink"

and

"After swimming it'll be time to go home."

On a table-top these can be presented from left to right, just as in reading. If two activities can be anticipated successfully, then try three. For instance:

“After swimming we’ll have a drink, and then it’ll be time to go home.”

Then four, five, and so on. Once more, it will be valuable to assess the child’s level of development in this area. How long a chain of future activities can he or she grasp? How far can this number be extended? By understanding how events are sequenced, a child may start to conceptualise the passing of time.

Timetables can be built up that last for a morning, a day, a week, or even longer. Especially with multiply disabled children, it is important to realise that the ‘curriculum’ lasts for all waking moments, so if timetables are to be used, they should not stop at 4 o’clock, or whenever the school day ends. Imagine, as a teacher, being given a watch while you were at school, and then being told to manage without it for the evening!

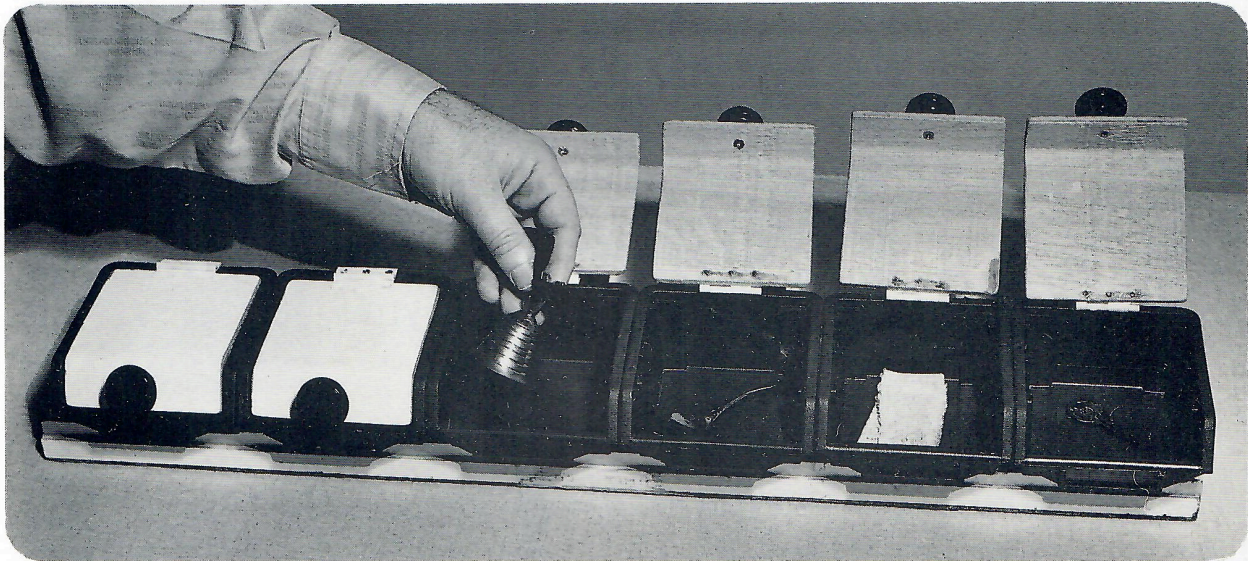
While consistency is a vital element in the education of children with learning difficulties, the unexpected is always liable to occur, and a tactile timetable enables changes to be made clear. For example, if the swimming pool goes out of action, this activity can be replaced on the timetable with another, and the alteration shown to the child. In this way, he or she may well be more accepting of the unexpected demise of a favourite activity than would otherwise be the case!

Sequences of objects can be used not only to anticipate future events, but to refer to past ones as well. To the typical question

“What did you do this morning?”

which many children with learning difficulties find so challenging—the objects could provide the necessary jog to the memory. For those whose grasp of language is still in the early stages, when past, present and future tenses are often confused, Objects of Reference can be an invaluable aid.

The timetable shown below is made up of a series of boxes with lids that can be closed to indicate that an activity is finished. The timetable is meant to be consulted at the beginning of the school day, and updated, by closing the appropriate lid, with each change of activity. Just before home-time, the day's events can be checked through in full. It is always available for consultation.



Timetable with a box for each object

(e) Presenting more information with the objects Once a child can understand, through using Objects of Reference, that basic activities such as the 'ball-pool', swimming, eating, and so on, are indeed going to happen, and when, in relation to other activities, these are going to occur, then the way this information is presented can be refined in a number of ways. For example, who is taking swimming? Are we going to have a drink in class or in the dining-room? The four main questions that need to be answered probably amount to:

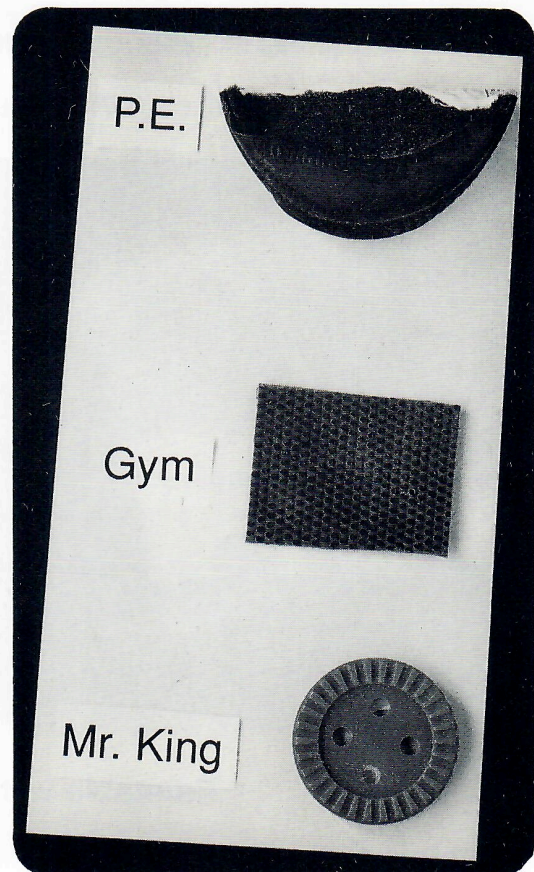
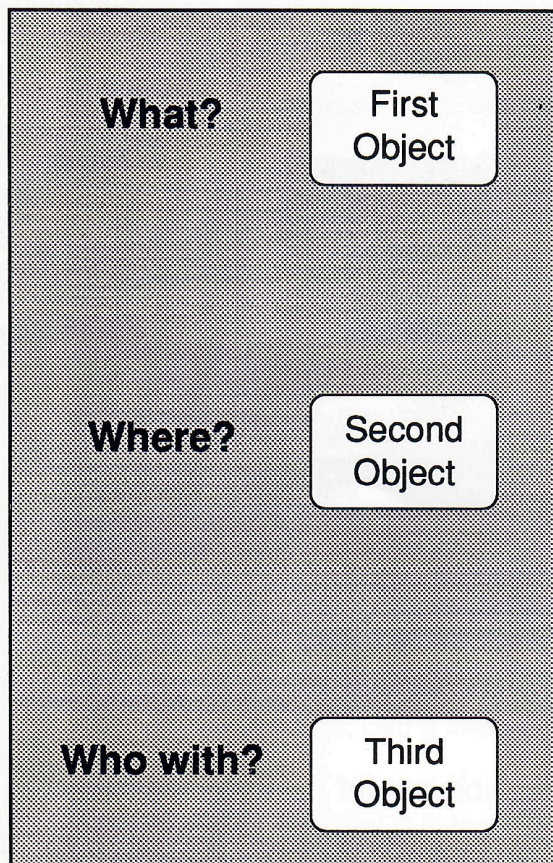
What?

When?

Where?

Who with?

The activity object will answer the first of these questions, and its position in relation to other objects will supply the information posed by the second. One solution to the third and fourth queries is to use cards laid out in the following way.



Card with three objects

The objects can be attached with Velcro to make the cards easier to set up according to needs of the moment.

(f) Using Objects of Reference as expressive language Once children have become familiar with receiving information through Objects of Reference, to tell them what is going to happen next, for example, they can be encouraged to use the objects in an expressive way—to choose for themselves the next course of action, for instance, or who it is to be with, or where, or when.

This idea could be introduced by offering a choice of two objects, representing, say, a drink of milk and a drink of lemonade, and getting the child to select the preferred option. From this ultimate forced-choice situation, the selection could be increased to three objects or more.

If a timetable is in operation, then a space could be left to be filled by the child with an activity of his or her own choice, perhaps as a reward for successfully completing the preceding task.

'Sentences' could be completed on the table top, possibly using a Velcro board or suitable alternative. For example, in answer to the question

"What did you do this morning?",

the child would be expected to select and order the appropriate objects from a number that were on offer. Using these, he or she could communicate the fact that:

"We had music [bell] in the gym [small piece of rubber mat] with Anna [metal bracelet]".

8 Other ways of using Objects of Reference The possibility of using Objects of Reference to practise sequencing from left to right has already been mentioned—potentially a more meaningful way of rehearsing this skill than the traditional pegboard! Objects can also be sorted into sets. For example:

"Put all the home activities [objects] into the left hand box,
and all the school activities [objects] into the right".

Again, familiar educational tasks take on a deeper significance for the child. She or he is not just sorting a series of impersonal objects, but things that really *mean* something, and that perhaps can lead to further language and discussion. Children using the same objects can work together, and interact with one another, in joint table-top activities.

9 Using Objects of Reference to mitigate challenging behaviour Hopefully, using Objects of Reference will help children to understand their world better, and improve their ability to communicate with others. These two factors in themselves may lead to a reduction in certain forms of challenging behaviour. Through being able to anticipate what is going to happen next, with whom, and where, and by knowing when a particular task is completed (through the use of an object for 'finished'), children's feelings of uncertainty and therefore anxiety may be reduced considerably. Being able to express their needs more precisely to others may ease feelings of frustration.

Moreover, a child's dependence on a willing adult always being there to interpret the world should lessen. To find out what is happening this afternoon, consult the timetable! Through using Objects of Reference, a reliance on sometimes intense personal relationships can be eased, as the child learns to gain more information from the environment. Again, the child's tendency to resort to challenging behaviour may be diminished.

10 Objects of Reference and other forms of communication Objects of Reference are not an exclusive system; they can be used in conjunction with other forms of communication such as signing and speech. If a child has difficulty with any form of meaningful interaction, then it may be profitable to explore all the avenues that are open.

11 Encouraging a child to choose a new object and its meaning From a box of possibilities, a child may be invited to select what he or she would like to represent a new activity, time, place or person. In this way, the youngster would truly 'own' the object as part of his or her personal symbolic language. Such a scheme may run into difficulties if a number of children are being taught together though, when, purely from a practical point of view, it may be desirable for objects to be used consistently from one child to another. Imagine having six different symbols that all meant 'lunch-time', for example! Labelling objects is one way of alleviating this problem.

12 Labelling objects All objects should be labelled, so that anyone can understand immediately just what a child means or needs. The idea of 'dual-meaning' need not stop with print. Objects may be labelled in braille or Moon too, for instance. It is even possible to have 'joint' objects, whereby the two different symbols that have evolved for a particular activity, person, place or time are attached to one another, functioning together rather like a bilingual road sign in, say, French and English.

13 Conclusion; the importance of careful planning and evaluation To conclude, I would like to stress how important it is to plan very carefully before embarking on a scheme using Objects of Reference. A child's development can be difficult to predict, and it would be unfortunate to begin with certain objects, only to find that they led to inconsistencies later and so had to be abandoned. For example, a piece of towel may be chosen to represent 'swimming', only to realise that it might have been better saved to mean 'washing' or even 'drying'.

Similarly, in devising a timetable for an extended period such as a week, it is well worth going through the five or seven days in a 'dry run' to iron out possible snags. It is amazing the things that can unwittingly be left out! Even having taken this precaution, I would recommend having a box of 'spare' objects ready to be assigned new meanings. The opportunity to play on a bouncy castle may suddenly present itself, for example, or an unfamiliar adult may arrive unexpectedly, circumstances which may both demand the creation of new Objects of Reference on the spur of the moment.

In the planning stage, remember to involve everyone who has contact with the child, at school and at home if possible. Objects of Reference are not merely intended as a table-top activity that fills half an hour every morning before break. In the same way that we have constant access to reading and writing, helping us understand things better, remember things and communicate with others, so Objects of Reference can inform the whole of a child's life, within school and beyond it. For this to occur, it is essential that the objects are used consistently,

even when people and circumstances vary. Hence at the outset, everyone's co-operation should be sought, and agreement reached as to the manner in which Objects of Reference are going to be used. Training will almost certainly be required. Keep a careful note of the approaches that are adopted, so that as staff come and go and situations change, the structure remains the same, and the child's learning environment is held intact.

Beyond the initial stages, progress will be dependent on systematic record-keeping and evaluation, which will enable future steps to be mapped out with precision. Have clear aims, negotiated with all concerned, including, as far as possible, the child. Always seek to move on: children will develop as far as our insight, imagination and perseverance allow.

14 Further reading There are a number of excellent books and articles which pursue in greater depth and breadth some of the topics introduced here. They include:

Confrontation between the Young Deaf-Blind Child and the Outer World by **Mary Rose Jurgens** (with and introduction by **J. van Dijk**), published by Swets & Zeitlinger B.V., Amsterdam and Lisse (1977).

A Development Programme for Deaf-Blind Children by **Tom Visser**, in 'Talking Sense', Vol. 31, No. 3 (Autumn, 1985).

Objects of Reference by **Laura Pease, Sue Ridler, Jon Bolt, Sue Flint** and **Chris Hannah**, in 'Talking Sense', Vol. 34, No. 1 (Spring, 1988).

Educating Fatima by **Jon Bolt** and **Sue Ridler**, in 'Talking Sense', Vol. 35., No. 4 (Winter, 1989).

Object Symbols: A Communication Option by **Ylana Bloom**, published by the North Rocks Press, 361-365 North Rocks Road, North Rocks 2151, Australia (1990).

Notes

Comments, criticisms and ideas for inclusion in future editions of this publication would be most welcome. Please send them to Adam Ockelford, RNIB National Education Centre (address overleaf).

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