

The stable-order principle

This principle means that the list of words used must be in the same repeatable order. For example, it is always 1,2,3,4,5 and not 1,2,4,5,3. The name tags or number tags are always used in the same order only. That is one of the main reasons that a lot of number rhymes were taught to the children to emphasise the correct series of numbers repeatedly to the children.

Teaching strategies to emphasise stable order principle:

Most of the time children with special needs attend school when they are really over aged, since they did not get the opportunity for any proper educational training. Hence certain strategies like using nursery rhymes to remember the stable order becomes very inappropriate to use for these children. So the methodology needs to be redesigned according to the age factor of the child. Instead of nursery rhymes, some meaningful words and using intonation some connections between words and prompts can be used to create a memory chunk that can help the children in learning the sequence of words.

Suggestions for teaching activities:

- Mixing sounds and word play to promote discrimination of the audio input in children.
- Activities to teach them key sounds in the words, and the importance of the sound of the first letter in the word.
- The number words can be incorporated into some rhythmic verses or as songs that would be enjoyed by all age group of children.
- It can be presented in different styles as rap songs or modified from popular catchy songs liked by the children.
- A lot of games can be played to co ordinate the number words with objects or with the activity.
- For example, clapping the hands or tapping on the table and saying the number can be a coordinated counting with that activity. In this activity it can be a fun filled activity with the intention of teaching counting with every action. The speed of the activity can also be combined for counting fast, slow counting, rhythmic counting and without the rhythm.
- The same activity can be modified by using other gestures and other movements of visual representations like number lines or counting the people in a row and so on. Any hand and arm gesture or clapping or stamping or any other action that is enjoyable to that child with special needs.

The cardinal principle

Whatever is the number of objects in the group, the final number that is called out represents the quantity of that set of objects. The instructor has to train the child to understand this basic principle and that all the previous steps of counting were all performed to achieve this objective. It is the cardinal number that finally gives us the representation as to how many items were counted and how many objects are there in that group.

It is very important for a child to understand the concept about cardinality and the relationship with quantification of objects. The children should actually understand that the process of counting is not just saying the numbers in the right order or touching the objects, but counting is an activity with the main purpose of knowing how many. They have to be very clear about this concept before proceeding further with the concepts of addition or subtraction.

It is very vital that the children understand the concept that, saying the last number actually represents the total number. Once they understand this then can also follow the instruction when they are asked to take out 4 pencils from a pack of 10 pencils.

The principle of cardinality will also teach them that if the counting is stopped in between then the last number called out is the number that tells about how many they have counted so far and then proceed further. This also indirectly explains about the concept that the next number in a sequence is one number more or represents a larger quantity.

Teaching strategies to teach the principle of cardinality:

It is very important to first observe if the child is appreciative of the purpose of counting and if they are enjoying the activity. And also to find out at what level are they applying the cardinal principle, because all these factors would only assist the instructor to plan for appropriate teaching strategies for that child. This will also facilitate them whether they should concentrate more on practical activities or games in the classroom.

- Meaningful counting with things that would give them happiness. For example, give the child a set of 4 toffees and ask the child to give one to each child in the row and the 4th one can be kept for himself. Modelling counting activities should be enjoyable and with a practical purpose. The instructor can emphasise the importance of the last item in a count with some different voice modulation or intonation.
- The children have to understand how each number progresses and the nature of cardinality.
- Different types of opportunities should be provided to emphasise the meaning of counting and the principle of cardinality with various types of objects. The objects used for the session can vary according to the likes and interests of the child, the place where the session is conducted also makes a difference in the learning of the child. It should not be a monotonous session done repeatedly in the classroom under controlled environment.

For example, nesting blocks or baskets can be used apart from the usual things, counting by pointing with a stick can also be a different activity. When the child is taken outside, he can be asked to count the flowerpots, trees inside the compound and so on.

- Counting and along with that comparing 2 sets of objects can also be taught to the children. The comparison of groups can be with just adding one more item to the group.
- The comparison of two sets of objects can also be shown in picture format or as visual representations.