

Common Learning Style Characteristics

- ◆ Good rote memory skills
- ◆ Attention problems
- ◆ Difficulty learning concepts, categories and classifications
- ◆ Compartmentalised chunk learning
- ◆ Difficulty developing meaning and generalising skills
- ◆ Concrete and literal thinking
- ◆ Visual thinking style

Good Rote Memory Skills

Children and adults with autism have excellent rote memory skills (the ability to remember things without giving any thought to the meaning). Examples of behaviour which show good rote memory skills include; recalling the dialogue of videos, books and films; echoing complete conversations perfectly; playing a tape recorder backwards and learning to sing all the songs both forward and backwards; reciting the number plates of all visitors cars; reciting the definition of every word beginning with 'A' from the Oxford Dictionary even though the person was unable to use any these words in sentences when communicating with others.

Attention Problems

“Switching on” attention: People with autism have difficulty “switching on” their attention. This is more obvious when they are required to attend to things other than their natural interests. They may require more time to focus their attention.

Orienting attention: When people with autism take in information through one or more of their senses they may have difficulty working out where the information originated (e.g. where the sound they hear is coming from).

Selecting what to attend to: Children and adults with autism have difficulty selectively attending to relevant details in their environment. Instead of scanning the whole environment to identify and focus on important details, the person with autism may focus on small details and be unaware of other things happening in the environment. Studies have shown that people with autism tend to be over-selective and attend to small, minute details (referred to as “spotlight attending”, OR take in all the information present in one chunk without editing for relevance, (referred to as “chunk” style learning) OR take in nothing at all.

Shifting attention: People with autism take longer to shift attention i.e. to disengage attention from what they are currently attending to, shift, then re-engage attention. They have more difficulty shifting attention from an auditory to a visual stimulus.

Sustaining attention: People with autism have trouble keeping their attention on something long enough to take in the necessary information, unless they are attending to their “narrow interest area”.

Sharing a focus of attention with others

(Joint attention): People with autism have difficulty sharing a focus of attention with other people.

Difficulty Learning Concepts, Categories and Classifications

The “spotlight” style of attending makes it difficult for people with autism to learn categories and classifications. To learn how and why things are grouped in categories, it is important to be able to work out how two or more things are similar or different. To do this a person must attend to the critical features of objects, events, or whatever is being compared. If a person with autism is attending to minute, insignificant details, it is difficult to notice overall similarities and differences.

Compartmentalised Chunk Learning

People with autism tend to learn information in chunks. They take information that occurs close in time in one go (simultaneously, as a whole) without editing the information for relevance and meaning.

Often irrelevant information is ‘pulled’ into the learned chunk. This is because they are unable to sort out what are important versus irrelevant details. People with autism may expect the whole chunk that has occurred in the past to occur the same way again and again. This is related to the need for sameness that was first talked about by Kanner in 1943. If things do not happen the way they are supposed to (i.e. according to the chunked sequence), people with autism may become confused and anxious.

Many children with autism do not learn language through the usual gradually expanding system of categories and rules. It appears that language may be learnt using the chunk learning style (echolalia).

Echolalia, (the repetition or echoing of words said by others), is common in autism. Research and practical experience suggests that echolalia is used by children with autism to communicate, make sense of what others say, and learn functional language.

This information is an extract from the Information Kit
“Thinking and learning in autism”.
For more information please contact Autism Spectrum
Australia (Aspect) on 02 8977 8300
or visit www.aspect.org.au

It is important to remember that people with autism may not necessarily understand the individual components of learnt chunks.

Rule-Governed Versus Flexible Abstract Thought

Generally, people with autism (those who have normal or above average intelligence) are able to solve problems that require rule-governed abstract thought with no difficulty (rule-governed abstractions are the sorts of problems that are found in maths, engineering and computer sciences). On the other hand, abstractions that require verbal reasoning, cognitive flexibility and complex memory are difficult for people with autism.

Developing Meaning and Generalising

Most people have a natural drive to see “big picture” meaning. They take input from various experiences and integrate this information with stored bits of information from past experiences. This allows them to develop a mental frame work or “scheme of things”. The framework allows people to interpret new experiences, anticipate and solve problems.

Happe (1999), suggests that autism is characterised by a cognitive style that is biased towards local rather than global information, thus people with autism tend to think in details and are not good at working out the relative importance of the details or how to integrate the little bits of information to form concepts and meanings.

Happe says people with autism are often concerned with isolated detail but do not grasp the whole picture (the overall message or purpose of an activity, scene or event). They see the whole picture as “lots of little parts”.

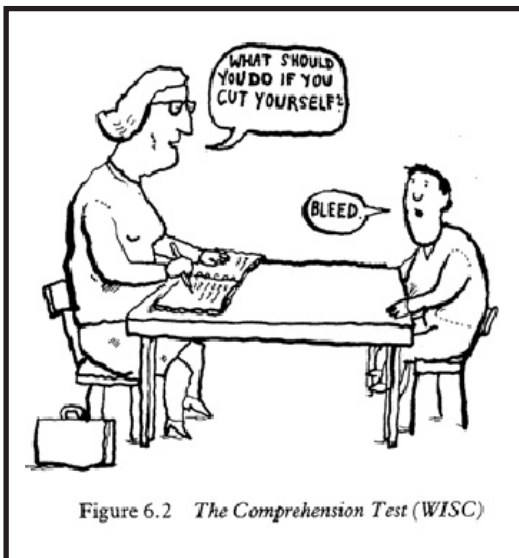


Figure 6.2 The Comprehension Test (WISC)

Concrete and Literal Thinking

Even the most capable children and adults with autism are very literal in the way they use and understand language. Sayings such as “Line up please”, “He’s over the hill” and “It’s raining cats and dogs” present difficulties for people with autism. Confusion caused by literal interpretations is one of the major causes of learning/behaviour problems for people with autism. A child with autism may insist on calling objects by particular names (like “graphite” pencil, not “lead” pencil).

There are other problems associated with the literal and concrete style such as difficulty understanding that things may have multiple labels (e.g. “swimmers/costumes/togs/cossies”) or words have multiple meanings (e.g. bat can have several meanings) and words change meaning depending on who is speaking and who is listening (the words “you” and “me” refer to different people, depending on who is speaking).

Visual Thinking

One of the most important strengths in autism is the visual learning style. The majority of people with autism are visual learners. In the words of Linda Hogdgon, (1996), it is best to think of people with autism “as being 90% visual and 10% auditory learners”.

Visual teaching strategies are recommended for people with autism for the following reasons:

1. Research indicates that the visual skills of people with autism are superior to their skills in other areas. People with autism are better able to comprehend permanent (non-transient) visual information because the message is present long enough for them to take in and process the information.
2. People with autism claim to use visual information to interpret their world.
3. Programs that use visual strategies are highly effective with people who have autism.

Learning Strengths

Janzen (1996) summarises the learning strengths in autism as the ability to:

- ◆ Take in chunks of information quickly
- ◆ Remember information for a long time
- ◆ Learn to use visual information meaningfully
- ◆ Learn and repeat long routines
- ◆ Understand and use concrete, context-free information and rules
- ◆ Concentrate on narrow topics of interest