

PERCEPTION, GESTALT

Perception is the attribution of meaning to received information (this is done at the level of short-term memory). When information becomes meaningful, the mind is, then, capable of processing the information further and preparing it for submission to long-term memory. Many theories exist which attempt to scientifically and rationally explain how perception works. Among those theories are **bottom up vs. top-down theory and Gestalt theory**. In addition to helping memorization, perception is important insofar as it permits to generate and take a decision and to adopt a strategy to fulfill the decision taken in a matter of some seconds.

According to the gestalts, the information present in the environment (generally visual and sometimes auditory) is much easier to perceive when it is displayed in one of the **six principles** (sometimes seven principles if we add figure-ground principle). These (five are presented here) principles are (*look at your one-page handout received in the lecture to understand these principles*):

1- Similarity:

People **immediately** perceive (understand/make sense of) information when they **quickly** establish a link of similarity between the same information among the existing information (the whole). Similarity can be in terms of shape, colour, matter, height, number, etc. As a general example, when you enter a supermarket, it is much easier to perceive the location of juice bottles because much information display the shape of bottle: you understand that there are many bottles (many information resemble each other (bottles of juice) because this is the department of juices. Therefore, you would immediately go there to buy a bottle of juice. If the bottles of juice were put in all sides and corners of the supermarket (which is large and spacious), it would be certainly not easy for you to establish a relation of similarity with the other products interfering (such as shampoo bottles or biscuit packs, etc.) and this would prompt you to search more carefully in order to find the bottle (the brand) of juice you wanted to buy.

Military camouflage is probably one of the best applications of gestalt principle of similarity. When the soldiers try to stealthily approach an enemy point, they keep merged/melted down with the vegetation and the terrain in order to keep undetected. The enemies' failure to notice any contrasts between the camouflaged soldiers and the environment is due to their perception of "normal" similarities in the environment and lack of perception of any suspicious dissimilarities (which can be interpreted as dangerous threats). Beware, a tree can fire at you with a Kalashnikov! In short, the more intelligently camouflaged in and one looks like the environment, the better one's chances to take the environment to his advantage and win the battle.

In education, the principle of similarity can be observed in a number of situations. This is possible when teaching young children to group or divide animals on the basis of their physical patterns before being able to group them on the basis of biological grounds. In this way, for instance, a zebra, tiger, striped hyena, striped antelope, etc. would fit into one group, and an elephant, hippopotamus, rhinoceroses would fit into one group because of their bulky bodies.

When a child learns to read the alphabet, the organization of the letters of the alphabet in terms of similarity can facilitate perception. For example, you might ask the child to identify and slowly write all the letters of the alphabet which are circular, rectangular, square, or linear in appearance. This technique is of direct implication to reading skill (decoding letters); any failure to correctly perceive and group the letters according to their similarities in terms of shape could be a sign of **dyslexia**.

Another implication of the principle of similarity in education is the capacity of learners to quickly and directly identify key information from a background/supporting information. A simple example of this is when reading a geographical map; we generally succeed in understanding the map when we quickly perceive **similarities between the keys** (symbols of roads, cities, water places, altitude, populated zones, etc.). This latter example can be used in EFL classes using content-based activities.

2- Proximity:

Data which is grouped close together in a limited space is easier to perceive than data which is sprinkled or tightly amassed and compact. When you are in a supermarket, it is easier to perceive things which are close together than data which are either dispersed or compact/mixed without a clear-cut separation (where are the limits of the fruit department and where are the limits of the vegetables department, etc.?). Fortunately, however, many supermarkets organise their products by putting some space between the different goods (generally on the basis of natural characteristics or purpose) which can be quickly found in their shelves/departments.

In education, the principle of proximity can be applied in different ways. As a teacher you might ask your learners to identify the main ideas in each paragraph of an essay. They can succeed in this task only if they clearly distinguish where the first paragraph stops and the second carries over (starts). In the past, thousands of pages were written massively (as one mass) without clear boundaries between paragraphs, sections, chapters, parts, etc. which now certainly makes decoding ancient manuscripts a painstaking ordeal. Your learners have clearly to respect the space between words (when reading or writing). Consider this example where the principle of proximity is absent: **ONEVERYHIGHAWAY**. This can be cut (by the mind) as: ON EVERY HIGH A WAY, or ONE VERY HIGH A WAY, or, ONE VERY HIGH AWAY, etc.

3- *Simplicity:*

Information which is simple is much easier to perceive; complex information is much less so. Simplicity is generally understood when the number of elements in the information is around seven items at the utmost—and the less the simpler (this is determined by attention capacity).

It is easier to perceive the architecture of a small city such as Bejaia than the architecture of a big city like Algiers where many roads crisscross, sometimes, in a confusing mode. In education, this example can apply for sentence types: students generally perceive faster and with much ease simple sentences with a *subject-verb-complement configuration* such as “**He likes Britain**”, whereas compound and complex sentences are less easily perceived (understood) as with this example: “*So disparate as it seems to express his desire to learn English because **he likes Britain**, he could not afford but to overtly announce his love for this country*”. Clearly, the same information is much easily accessed to in the first example and much less so in the second one.

4- *Common direction (good continuation).*

When people run **frenetically** in some situations of war, natural catastrophe, etc. it is possible for you to quickly understand the source of danger by perceiving the common direction people follow to save their lives (because there would be a pattern which many people follow even when so many directions can be followed by other groups) . Similarly, satellite videos about the movements of the enemy can be analysed in terms of common direction; for example, an indicative and significant number of (example 50 among many) vehicles—all moving towards the same direction—can be understood as an enemy organization by the engineers visualizing the satellite images.

In order to survive and organize their social activities, many tribes and cultures over the world depend on their capacity to understand (perceive) events of a common direction in nature. This is the example of watching the movements of flocks of birds or herds of animals in Africa. When the animals start to gather together following a common direction, which is generally a sign that the animals want to migrate (because of winter, summer, search for food, etc.), humans will take the appropriate decision to keep alive (especially if they depend on the animals such some nomadic peoples). These examples, and many others (such as maritime navigation), should be understood in the larger role of education to prepare people to intelligently make profit from the environment thanks to perception. In this way, people who correctly understand orientation (such as north, east, south, west) can easily read the common direction of trees and plants (which naturally have a north-south orientation, because they need the sun’s light to grow). Therefore, this will help in finding the way to safety in case we lose our way!

In education, the common direction principle can be applicable in arts and geometry/architecture, etc., much often than in humanities and language sciences (except reading and writing).

5- Closure:

The principle of closure is the opposite (although helps to complete it) of the principle of proximity. This principle states that disconnected information is perceived as being connected. Information which is divided is sometimes seen as connected which facilitates understanding. Some traffic accidents occur because individuals mistakenly perceive the disconnected line in a road as being connected! When you listen to someone speaking but who suffers from stuttering/cluttering (a psycholinguistic speech disorder where the individual pauses/stops and repeats syllables and words), it is possible for you to make sense of his/her speech provided that the *pauses and the repetitions* do not stay too static and lengthily disconnected from each other. Otherwise, the principle of closure can be used to teach children to assemble disconnected parts into a homogeneous whole in a puzzle exercise (geographical maps reconstruction, paragraph reconstruction, filling in gaps, etc.).

Although gestalt principles have been successfully and widely used in education (using colours, underlining, spaces, indentation, bold writing, detached titles from the text, etc. in textbooks and lesson presentations), they, nonetheless, do not explain why people tend to see things which actually does not exist in the physical environment and vice versa. That is to say, perception at the level of the mind is totally neglected by gestalts who only give a premium to the physical organization of data do not explain the mechanisms of perception cognitively. The role of personal and cultural contributions to perception is very important in making sense of what surrounds us. For example, a disconnected line in a road is perceived as being connect might well be due to fatigue or illness which impede the normal functions of the brain. Likewise, it is not always obvious whether or not people tend to see similar things because of the way they are arranged or because of our previous experiences and familiarity with those similar objects. This issue is better explained by top-down theories as well as information-processing mechanisms.