

COGNITIVE COMPONENT: PERCEPTION AND ITS NATURE

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Abstract

This research paper is about the importance of perception in teaching performance. For the fulfilling requirement of quality education, it is the responsibility of teacher education programme to make a student teacher, who is able to give justice to his/her profession hence through researches, studies we are recommending something new, valuable in teacher training programmes. But we still unaware about from this how much student teacher acquire? What is their way to perceive it? So the purpose of this paper is to focus the cognitive term “perception” which is caused of performance. This paper is helpful to find out till which extend and how perception plays role in performance of teachers.

Teacher education programme and perception

There are many roles of teacher, he is manager, guide, instructor, communicator, mentor, etc from all these roles the main role of teacher is “TO TEACH” [Instructor]. Teaching is a soul of teacher hence teacher education program has lots importance to training of teaching. Teacher education program consists the practical’s related to teaching such as micro teaching stray lessons lesson based on C.C.M. , Block teaching ,etc teaching is not a simple activity but constitute a cyclic pattern as follows-

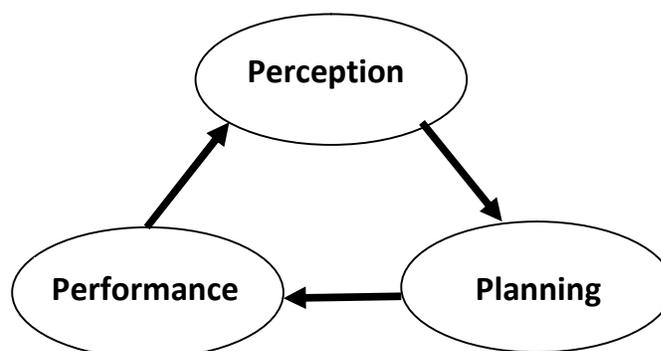


Figure 1 Three P's of teaching

In short it is called 3 P's of teaching. Performance is always depending on perception, perception results from an innate organizing process. (Gestalt).All these organizing process are including in cognition. We can say that if we want better performance of teacher it is needed to enhance teacher's perception ability that's why it is necessary to know the concept of perception and its whole nature then we can think about how we can improve the



perception ability of student teachers. Through this paper researcher will try to focus the concept of perception.

Cognition

The mental process of knowing, including, aspects such as, awareness, perception, reasoning, and judgment.

Perception

- i. “Perception is defined as an act of being aware of one’s environment through physical sensation, which denotes on individual’s ability to understand.”

(Chambers Dictionary)

- ii. **Perception is the process whereby people select, organize and interpret sensory stimulations into meaningful information about their work environment.**

- iii. So if we accept better performance from student teachers we must be careful about these things-

- ⇒ Perception is the single most important determinant of human behavior.
- ⇒ There can be no behavior without perception.
- ⇒ Our attention, feelings and the way we act are influenced by our environment.
- ⇒ Perception helps you to gather data from your surroundings process the data and make sense out of it.
- ⇒ In perception it is difficult to separate the information from the action.
- ⇒ It is basically a process of gaining mental understanding.
- ⇒ Perception guides the Perceiver in harnessing, processing and channeling relevant information towards fulfilling the perceiver’s requirements.

Perception is the organization, identification, and interpretation of sensory information in order to fabricate a mental representation through the process of transduction, which sensors in the body transform signals from the environment into encoded neural signals

- i. All perception involves signals in the nervous system, which in turn result from physical stimulation of the sense organs.
- ii. Perception is not the passive receipt of these signals, but can be shaped by learning, memory and expectations.
- iii. Perception depends on complex functions of the nervous system, but subjectively seems mostly effortless because this processing happens outside conscious awareness.

• How this concept < Perception > studied in other subject :-

1. Psychologies: Perception has progressed by combining a variety of techniques.
2. Psychophysics: Measures the effect on perception of varying the physical qualities of the input.
3. Sensory Neuroscience :
 - i. Brain mechanisms underlying perception.
 - ii. Perceptual system can also be studied computationally in terms of the information they process.

4. Philosophy: Perceptual issues E.g. Smells or colors exist in objective reality rather than the mind of perceiver.

Process of Perception

The process of perception begins with an object in the real world, termed the distal stimulus or distal object e.g. light, sound, physical process the object stimulates the body's sensory organs.

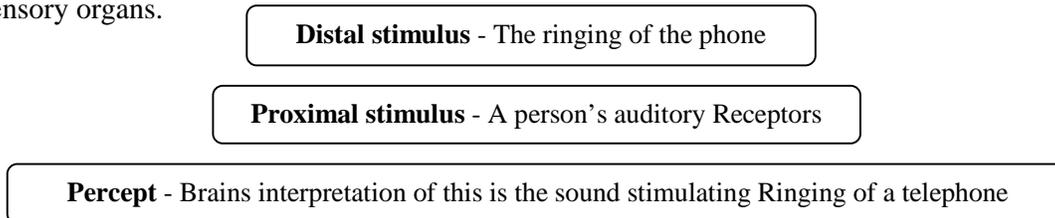


Figure 2 process of perception

The Steps in the Perceptual Process

- The Environmental Stimulus
- The Attended Stimulus
- The Image on the Retina
- Transduction
- Neural Processing
- Perception
- Recognition
- Action

Components of Perception

Alan Saks and Gary Johns describe the components of Perception.

1) Perceivers experience, motivational state and emotional state affect on his/ her perception. The person who becomes aware about something and comes to a final understanding.

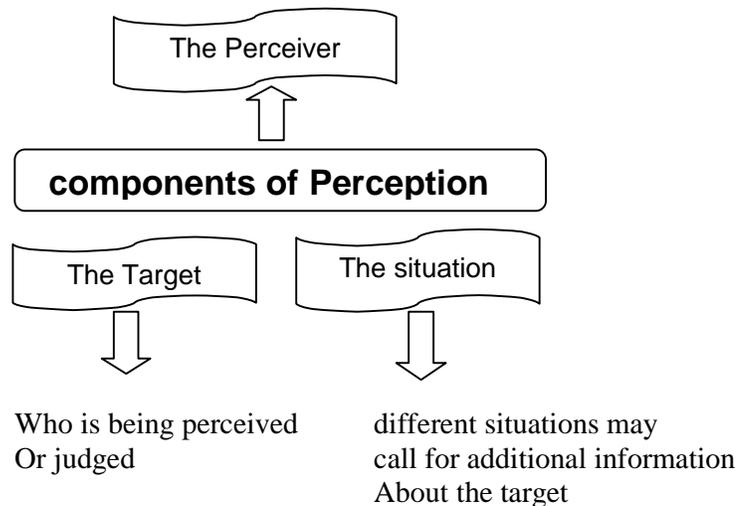


Figure 3 components of perception

Characteristics of Perception

These characteristics is drawn from Nelson and Quacks (OP cit: 84-87) concise description of the three major characteristics that influence our perception, When we deliver training to student teacher we must consider these characteristics of perception.

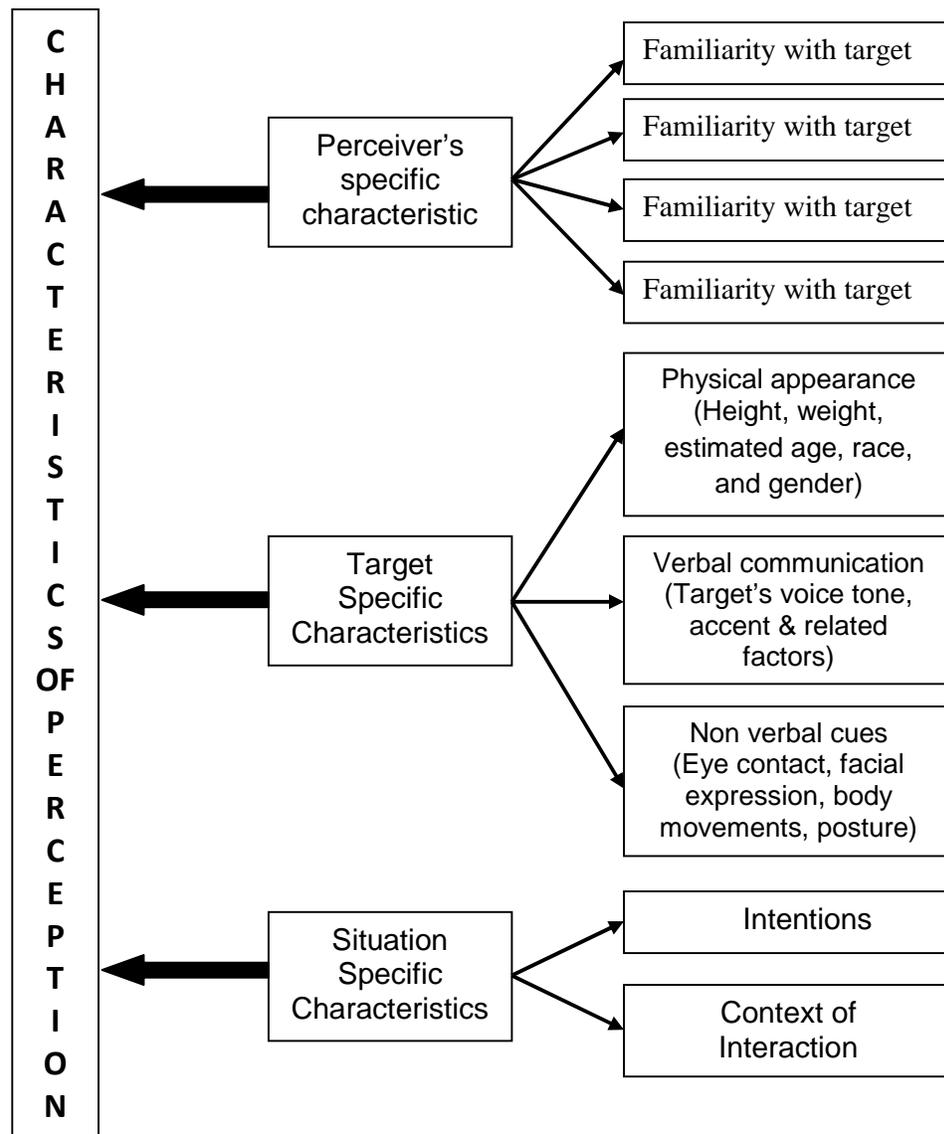
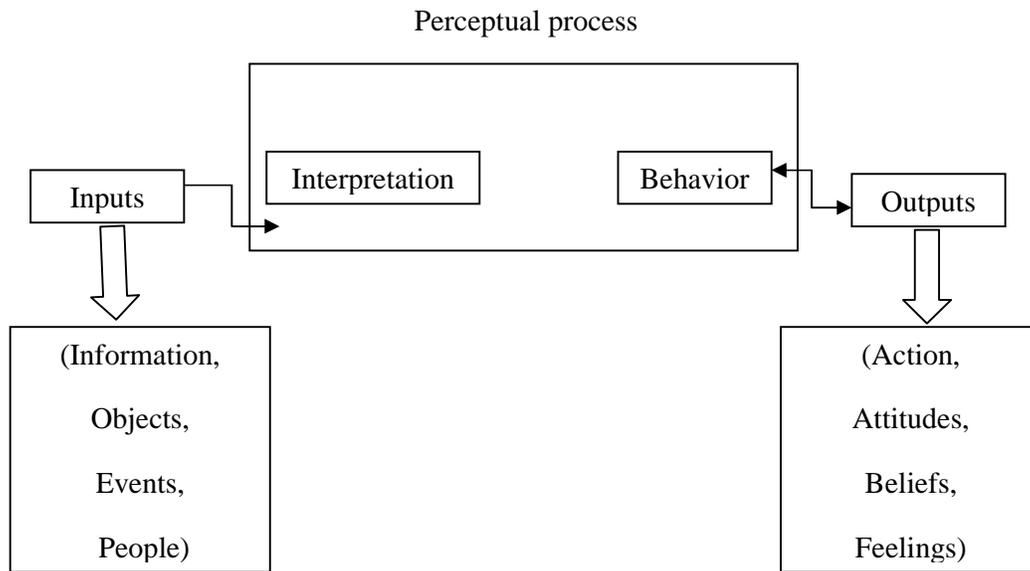


Figure 4 characteristics of perception

Model of the perceptual process

The quality of input that a process attracts determines the quality of output that the process gives out. The perceptual inputs are first received and then processed by the perceiver and the resultant output becomes the lease of the behavior. Following figure contains a simple model of the perceptual process.

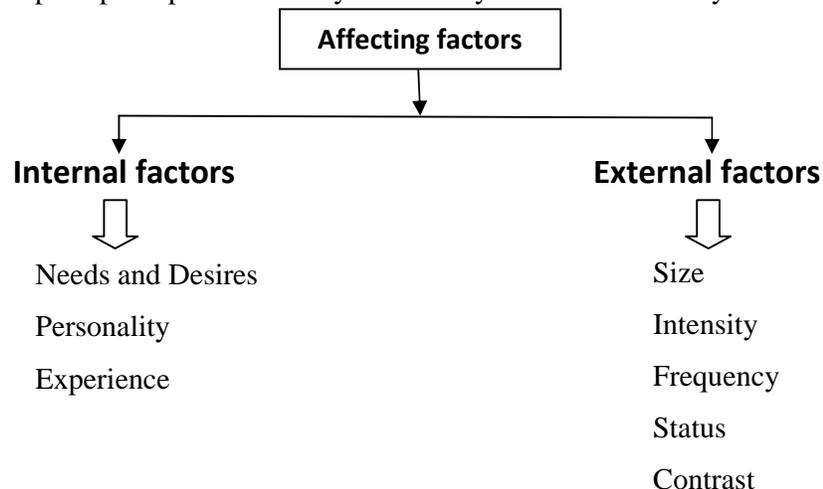


Variables in the perceptual process

- 1) Inputs - Perceived inputs are the objects, events, and people etc. that are received by the perceiver.
- 2) Process -The received inputs are processed through selection, organization and interpretation.
- 3) Outputs - Through the processing mechanism the output (feelings, actions, and attitudes) is derived.
- 4) Behavior - Behavior is dependent on these perceived outputs the Perceiver's behavior in turn; generate responses from the perceived and these responses give rise to a new set of inputs.(Theory of organization and behavior by Rao V.S.P. and Narayana)

Factors Affecting Perception

The perception process mainly affected by two factors namely the internal and external.



Needs and Desires

People at different levels of needs and desires perceive the same thing differently.

1) **Personality**

It is a trite say that optimistic people perceive the things in favorable terms, pessimistic beings in negative terms.

2) **Experience**

Combined with knowledge, experience has a perpetual impact on the perception of an individual. Successful experiences enhance and boost the perception ability and lead to accuracy in perception of a person.

External factors

1) **Size :** Perceptual stimulus of larger sizes has higher chances of being perceived. This is due to the fact that the factor of size is commonly associated with dominance and others to standing out for selection.

2) **Intensity:** This factor has to do with promoting the chances of a stimuli being selected. The greater the intensity of a stimulus the more likely it will be noticed.

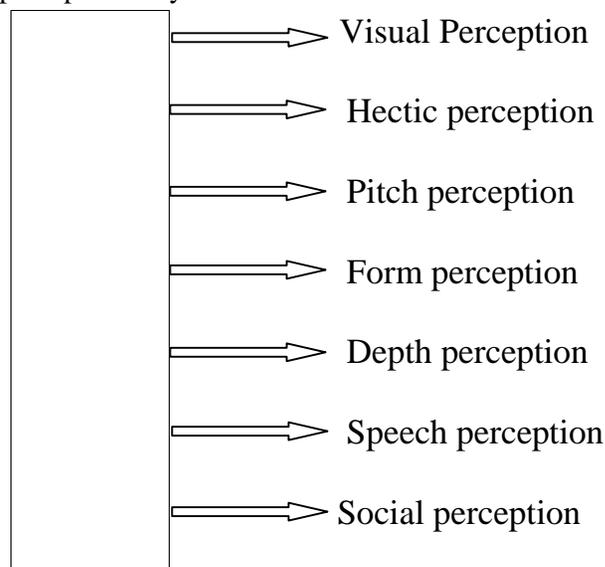
3) **Frequency:** Addresses the attention that accrues from the steady repetition of a particular stimulus. The art of repetition simply attracts out alertness and provost our sensitivity to the message being sent across.

4) **Status:** The status of a person being perceived exerts a lot of influences on a perception.

5) **Contrast:** Stimulus that share common features with the environment are less likely to quality for selection by the perceiver compared to those that contrast sharply with the environment

Various types of Perception

There are 7 types of perception they are as follows:



1) **Visual perception**

“visual perception is the ability to interpret the surrounding environment by processing information that is contained in visible light”.



The resulting perception is also known as eyesight, sight, vision.

The visual system in humans and animals allows individuals to assimilate information from the environment. People interested in perception have long struggled to explain what visual processing does to credit what is actually seen.

- The poor quality information gathered via the eye seemed to him to make vision imposition
- Vision could only be the result of some form of unconscious inferences a matter of making assumptions and conclusions from incomplete data, based on previous experiences.
- The Gestalt Laws of organization have guided the study of how people perceive visual components as organized patterns or wholes, instead of many different parts.
- According to this theory, there are six main factors that determine how the visual system automatically groups elements into patterns: proximity, similarity, closure, symmetry, common fate, and continuity.
- Transduction is the process through which energy from environmental stimuli is converted to neural activity for the brain to understand and process.

2) Depth perception Depth perception is the visual ability to perceive the world in three dimensions and the distance of an object.

Depth sensation is the corresponding term for animals, since although it is known that animals can sense the distance of an object. It is not known whether they “perceive” it in the same subjective way that humans do.

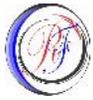
3) Pitch (music) perception Pitch is a perceptual property that allows the ordering of sounds on a frequency-related scale. Pitches are compared as higher and lower in the sense associated with musical melodies, which require sound whose frequency is clear and stable enough to be heard as not noise

4) Form perception Form perception is the recognition of objects in the environment. It is remarkable that despite the fact that each instance of observing the same object leads to a unique retinal response pattern, the visual processing that takes place in our brain is capable of recognizing these experiences as analogous in a way that allows for invariant object recognition.

- Essentially object recognition is the ability to assign labels to objects that allow us to categorize and identify them in a way that distinguishes one object from another.
- It is important to recognize that during visual processing information is not created but rather reformatted in a way that draws out the most detailed information of the stimulus.

5) Haptic perception Haptic perception is the process of recognizing objects through touch. It involves a combination of sensory perception of patterns on the skin surface (e.g.) edges, curvature, and texture) and proprioception of hand position and conformation.

- People can rapidly and accurately identify three dimensional objects by touch. They do so through the use of exploratory procedures. Such as moving the fingers over the outer surface of the object or holding the entire object in the hand.



6) Speech perception Speech perception is the process by which the sounds of language are heard, interpreted and understood.

- Research in speech perception seeks to understand how human listeners recognize speech-sounds and use this information to understand spoken language.

7) Social perception According to Nelson and Quick (1997)

Social perception is the process of interpreting information about another person”

- The opinions you form about another person’s depends on the amount of information available to you and the extent to which you are able to correctly interpret the information you have acquired.
- Rao and Narayan draw attention to the fact that since there are no specific strategies for understanding the perception of others, everyone appears to be,” let with his own inventiveness, innovative ability, sensitiveness and introspective skills to deal with perception.
- Perception refers to the process by which we form impressions of other people’s traits and personalities.

Summary

If we want to better outcomes from teachers, improvements in teacher’s performance, It is needed to criticize whole cognitive process of teachers about teaching, and perception is the core component of this cognition. Whenever Teacher educator organize micro lessons, stray lesson, or other training programme they first up all understand how will be this training perceived by student teachers, and according to that they should do changes in its nature, way to convey it. If we will be able to suggest some techniques for better perception and follow it in our Training programme defiantly we get its good result in student teachers performance as a teacher. Through these types of innovations we can overcome quality issues which we are facing in our Teacher Education Programme.

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