AUCTORES
Globalize Your research

Journal of Neuroscience and Neurological Surgery
Filomena Ermida da Ponte,

Open Access

Short Communication

The Influence of Cognitive Style (FDI-Field Dependence Independence) in the Academic Performance of Children and Adolescents

Filomena Ermida da Ponte
Universidade católica Portuguesa, FFCS/UCP/Braga, Portugal.
Corresponding Author : **Filomena Ermida da Ponte**, Ph.D, Universidade católica Portuguesa, FFCS/UCP/Braga, Portugal,
E-mail: filomenaponte@hotmail.com

Received date: April 26, 2019; **Accepted date :** June 16, 2019; **Published date:** June 19, 2019

Citation : **Da Ponte FE** (2019) The Influence of Cognitive Style (FDI-Field Dependence Independence) in the Academic Performance of Children and Adolescents. Neurosci Neurol Surg 3(3); Doi:10.31579/2578-8868/051

Abstract

The concept of cognitive style has its origins in the movement "New Look" emerging research proposed by Klein and Schlesinger, in an article titled “Where is the perceiver in perceptual theory?” an inappropriate assumption for psychologists of the time claiming the intelligibility and its evidence.

Herman Witkin was one of the precursors in the investigation of cognitive styles pondering them as quirky shapes of people to realize and process information.Witkin subsequently reinterpreted the dimension of Field Dependence-Independence as an articulated style versus global, a solid bipolar variable that integrates a measure of the ability of analysis, i.e. the disruption and the structuring of figurative contexts. The concept of increasing articulation applied to the experience of immediate configurative stimuli (perception) can also be applied to the experience that supports symbolic material (thought). Thus, we can conclude that Field Independent individuals are also called "articulated thinking", in relation to intellectual functioning, while the Field Dependent, in this aspect, present global type characteristics. The first (articulated type) excel in the ability and ease in solving problems that require analysis power, isolate critical elements of a given context, linking scattered and isolated elements, recreating new structures. The second or global type individuals, as opposed to first, have less ability to restructure and save the stimulating setting as they have been granted.

Progressively, the Field Dependence-Independence was expanding to a number of areas considered relevant enough for its theoretical developments, áreas traditionally framed in the context of personality and cognitive functioning [1]. Currently, the possibility that the Field Dependence-Independence cognitive style is related to the individual differences in learning and memory was getting consolidated, presumably by the greater emphasis that cognitive psychology places on the active role of the individual, in the processes of acquisition, storage and retrieval of information. This approach strengthens the study of individual differences in learning and memory.

There is no doubt that the mnemonic activity is considered a fundamental structure in the information processing. The encoding, storage and information retrieval are processes of this activity, closely linked, which regulate the retention of information and its availability for its application when necessary. It is assumed that these processes work in chain, and it is not possible to analyze these disintegrated operations.

When we mention encoding set of processes, we refer to the set of processes which are essential for storing information in memory which are responsible for the transformations of the sensory stimuli in codes or expressive traits and comparable memory systems [2]. According to several studies, we have knowledge of relevant data that suggest the existence of significant differences in the encoding form between field dependent and independent students.

The analysis of the processes of memory would remain incomplete if you don't explain the circumstances and operations that determine the storage and retrieval of information. With reference to these processes also differences have also been found between field dependent and independent individuals.

Traditionally framed in the context of personality and cognitive functioning [1]. Currently, the possibility that the Field Dependence-Independence cognitive style is related to the individual differences in learning and memory was getting consolidated, presumably by the greater emphasis that cognitive psychology places on the active role of the individual, in the processes of acquisition, storage and retrieval of information. This approach strengthens the study of individual differences in learning and memory.

There is no doubt that the mnemonic activity is considered a fundamental structure in the information processing. The encoding, storage and information retrieval are processes of this activity, closely linked, which regulate the retention of information and its availability for its application when necessary. It is assumed that these processes work in chain, and it is not possible to analyze these disintegrated operations.

Objectives of the Research

Restless by the generating questions on the predictive value of FDI in the success or failure at school, we add to our executive concerns in the most practical form of promoting skills for school success and other social and personal achievements of the individuals. Thus, the objective of this study is to verify whether individuals with different cognitive styles feature differences in performance when coding processes are involved, storage and retrieval of information (visual and verbal). We will investigate the cause of these discrepancies, as a dominant motif of this study, we seek to ensure, if the differences observed in individuals of this age range are the same or different in groups of different ages [3].

Reflecting the concerns arising from the professional teaching practice, in this study it is our aim to try and understand the differences of the students in their learning and school achievement. Considering the probability of these differences being associated with cognitive variables, we intend to add to the cognitive variables usually considered (e.g. intelligence quotient), other more descriptive variables of cognitive processing. Being studies about the cognitive styles scarce in Portugal, and more specifically on the FDI (Dependence-Independence), we want to diversify the cognitive information used in the diagnosis of learning problems and inventory of practical ways of promotion of cognitive skills and learning of students with greater difficulties.

Thus, the present work relates to cognitive style FDI, assumed to be an attractive concept to describe the cognitive functioning of the subject and its intellectual assessment. It is in this framework of cognitive orientation, or theory of information processing, we have endeavored to theoretical models that can support us in a better analysis of the human cognitive functioning, specifically in learning tasks and troubleshooting.

This analysis, along with more circumscribed objectives of research, urges some practical implications, in particular in the world of education. Hence, in fact, a growing concern of the schools with the individualization of teaching, assuming this individualization as one of the guiding principles of the educational act, particularly in the context of a "comprehensive school". The need for a differentiated methodology or individualization

Conclusion

The information collected in this study allows us to recognize the existence of evident differences manifested in the cognitive functioning of field dependent and independent individuals [4]. Thus, the results relating to cognitive processes examined allow us to conclude that the subjects' cognitive style interferes, since very early ages, in their cognitive processes.

On the use of strategies on SVLT-CC, the FI, in addition to being more for its application, use more analytical strategies, specifically, in Rey A [5]. Complex Figure by providing them the decomposition of the information and its restructuring according to their needs. In contrast, the FD individuals used a more global strategic approach. So, the FI used semantic strategies more frequently, both in the 8-9 years of age group, as in teenagers (13-14 years of age), while the FD and the intermediate individuals used serial type strategies.

We conclude that the differences between FD students, intermediate and FI, at any age, are not related to the amount of information retained or stored, but with differences in frequency of use of organization strategies of learning which do point out the differences in their learning processes [6,7].

The vision which recognizes the differences in the individuals performance with different cognitive style (FD and FI) is not very robust. Classified by the inferiority/superiority dichotomy, related to the dependence/independence, respectively, we admit that the interpretation of the results of our research may contribute to the demystification of certain claims concerning the qualitative assignments of these two groups namely opposites, not in terms of intellectual capacity but in terms of cognitive functioning.

References

1. Witkin HA (1954) Individual differences in ease of perception of embedded figures. J Pers 19(1): 1-15.
2. De Vega M (1998) Introducción a la psicología cognitiva. 9ª edition, Madrid: Alianza.
3. Roberge JJ, Flexer BK (1981) Re-examination of the covariation of field independence, intelligence and achievement. Br J Edu Psychol 51(2): 235-236.
4. Robinson JA, Bennink CD (1978) Field articulation and working memory. J Res Pers 12(4): 439-449.
5. Rey A (1987) Test de Copia de una Figura Compleja. 5ª edition, Madrid: TEA.
6. Sweetland RC, Keyser DJ (eds) (1991) Tests: A comprehensive reference for assessments in psychology, education, and business. 3ª edition, Austin, TX: Pro-ed.
7. White BW (1954) Visual and auditory closure. J Exp Psychol 48(4): 234.