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Some Viable Techniques for Assessing and Counselling Cognitive Processing Weakness

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Abstract
Cognitive Processing weakness (CPW) is a psychological problem that impedes students' ability to learn effectively in a normal school setting. Such weakness may include; auditory, visual, conceptual, sequential, speed and attention processing. This paper therefore examines the basic assessment or diagnostic approaches such as Diagnosis by Inclusion Approach, I.Q Discrepancy Approach and Intrinsic Processing Approach. Some effective counselling techniques examined include Free Association, Brainstorming, Responsive Listening Technique and Cognitive Restructuring. Recommendations offered suggest early diagnosis of students and use of viable techniques for counselling students with Cognitive processing weakness.
Keywords: Cognitive processing weakness, Assessment, Counselling techniques

1. Introduction

Students, whether at primary, secondary or tertiary level often exhibit differential weakness in mental processing. Such weakness may occur in auditory, visual, sequential, conceptual, speed, and attention processing (Crouse, 1999). Crouse laments that:

> those with these processing problems struggle most with reading speed, learning or remembering specific math steps or formulas and the mechanism of writing and organizing thoughts for expression. While Some may struggle to keep up with all instruction, classroom activities, homework assignment, or any situation with an expressed or time pressure (p.1).

With increase in classroom population, teachers find it difficult to identify the various processing/learning styles of every student, thereby leading to frustration, indiscipline, truancy and dropout (Haruna, 2015). This phenomenon occurs mostly in school where guidance and counselling is lacking or teachers are not guidance oriented. Consequently, the inappropriate counselling techniques used do not only complicate students' problems but worsen and distort the developmental process of learners. In order to appreciate the trend of thought, this paper is presented under the following sub-headings: conceptual background of CPW; approaches to assessment of CPW; techniques for counselling students with CPW, conclusion and recommendations.

2. Conceptual background of Cognitive processing weakness (CPW)

Cognitive processing refers to how the brain takes in, uses, stores, retrieves, and expresses information (Crouse, 1999). There are many ways in which the brain process different kinds of information. However, six main types of cognitive processing are believed to be most responsible for learning. These includes; auditory processing, visual processing, sequential processing, conceptual processing, processing speed and attention processing (Crouse, 1999).

2.1 Auditory processing

Auditory processing involves how well a student can understand auditory information, such as differences between sounds/voices, remembering specific words or numbers, remembering general sounds patterns, understanding even when they miss some sounds, blending parts of words together and music (Crouse, 1999; and Hammill & Bryant, 1998). Students with a general processing weakness usually have most difficulty with general reading, general writing and language expression. Such students are likely to have dyslexia (www.ABCsofLD/ADHD.htm).Holons cooperate with peers in order to organise and reorganise themselves based on mutually acceptable plans. This is for solving any problem or conflict they might encounter from time to time, and ultimately, serving the goals of the larger whole.

2.2 Visual processing

Visual processing involves how well a student can use visual information like seeing differences between things, remembering visual details, remembering general characteristics, visual-motor coordination, visualization, etc. (Plessis, 2000 and Crouse, 1999). Students with this kind of processing problem may experience difficulties in poor handwriting, poor spelling. They may also have difficulties in visualizing math problem, reading slow speed, and poor comprehension. Other difficulties according to Crouse include poor organization/planning/ neatness, difficulty learning by demonstration, difficulty rechecking work for accuracy, difficulty learning by video. According to Okwusogu-Baba (1994), visual processing weakness can lead to dysgraphia, dyslexia, and

dyscalculia.

2.3 Sequential processing

Sequential processing involves organizing and memorizing specific bits of information including facts, figures and formulas (Crouse, 1999). This is like a computer that act as main storing system in the brain. Sequential processing includes short term memory for details, long term retrieval of details, fine motor coordination, finding words you want to say or write, organization of thoughts and materials, writing mechanics, reading speed/ sound out new words, attention details etc. Students experiencing a general sequential processing weakness often have most learning difficulties in the areas of basic math (dyscalculia), basic reading (dyslexia), expressive language and writing mechanics (dysgraphia) (Giwa, 1996: 87; and Hammill & Bryant, 1998: 36).

2.4 Conceptual processing

Conceptual processing involves looking for the big picture, overall patterns and underlying concepts for use in higher order thinking, creativity and reasoning (Crouse, 1999). Conceptual processing includes memory for general themes or ideas, reasoning, spatial awareness, general knowledge, spatial thinking, estimation/approximation, conceptual understanding, creativity/initiativeness, reading comprehension, use of context, rhythm, and music. Students experiencing a general conceptual weakness often experience much difficulty with reading compression, math reasoning and creative writing (Okwusogu-baba, 1994).

2.5 Processing speed

Processing speed refers to how fast information travels through the brain (Fiedorowcz, 1999). Students with CPW experience some processing speed difficulty when required to process information through their weakest channel. According to Crouse (1999), processing speed affects short-term memory, long-term retrieval, talking speed, word finding, writing speed, reading speed, attention, reasoning and general response speed. Students experiencing a general processing speed weakness often have learning difficulties in all academic areas due to inability to process all types of information quickly.

2.6 Attention processing

Attention processing refers to the overall ability to manage or regulate all the various cognitive and emotional processes. According to www.ABCsofLD/ADHD.htm, attention processing involves initiation, planning, organization and execution of various tasks as well as the ability to cope with transition or regulate emotional responses. Attention processing includes ability to stay focused on tasks, ability to plan and anticipate organization of thoughts and materials, ability to follow through and complete tasks, ability to cope with unstructured situations, and ability to regulate emotion. Students experiencing general attention weaknesses often struggle academically with work completion, organization, and motivation for any task, which is perceived as difficult, frustrating or simply unappealing.

3. Approaches to assessment of Cognitive Processing Weakness

Several approaches to assessment and diagnosis of cognitive processing disorder (CPW) are known. However, the most popularly used approaches include the following;

3.1 Diagnosis by Exclusion approach

This refers to directly diagnosing the extrinsic factors that are likely to have caused CPW, such as cultural differences, insufficient or inappropriate instruction (National Research Center on Learning Disabilities, 2001). Proponents of this approach belief that low general intelligence, lack of opportunity to learn and sensory or emotional impairment are the potential causes of CPW therefore should be measured. However, critics to this approach question its validity and reliability (Torgesen, 1991).

3.2 I.Q. Achievement Discrepancy approach

This involves the use of aptitude and achievement tests to measure current level of academic functioning in relevant areas. Its short coming according to National Research Center on Learning Disabilities (2001) is that it is not sufficient to document the presence or absence of underachievement which is a critical aspect of the conduct of CPW.

3.3. Intrinsic Processing Weakness

This involves directly assessing CPW by measuring the ‘’intrinsic’’ processing or capacity weaknesses. According to Hammill & Bryant (1998) and Crouse (1999), they are presumed to cause the academic performance problems shown by individual with CPW. Although critics assert that it is not easy to determine whether performance problems on psychological tests reflect intrinsic processing disorders (Torgesen, 1991).

4. Techniques for Counselling Students with CPW

Several techniques for counselling students with learning problems are being used by practicing counsellors. Although CPW is a cognitive disorder, emphasis will not only be on cognitive techniques, but shall reflect affective and behavioural. Thus, any one or a combination of the following may be effective in counselling of students with CPW.

4.1 Free association

In this technique, the client is allowed to freely express his/ her thought regardless of how painful, offensive or illogical it may sound. The duty of the counsellor at this point is to identify and interpret the areas of difficulties and weakness in the processing abilities of the client, thereafter guide him/ her to identify appropriate remedial and intervention strategies (Haruna, Mebu, Gambo & Mu'azu, 2010).

4.2 Brainstorming

This technique employs the idea of team work. It promotes counselling through cooperation rather than competition. Instead of competing against each other, students work together to seek solutions to problem under the supervision of the counsellor (Johnson & Johnson, 1956).

4.3 Responsive listening technique

Since CPW impede information processing unit of the brain, attentive and responsive skill is very crucial in this case (Crouse, 1999). Skills used in this technique include attending and receptiveness, physical attending, giving permission to talk, and hearing both verbal and non-verbal messages (Denga, 1983).

4.4 Cognitive restructuring

This technique involves modification in the cognitive structure of students with CPW. In this case, the counsellor helps the client to critically evaluate himself, his strength and weaknesses. The aim is to eliminate the low concepts often exhibited by the student, so that he/she can appreciate and capitalize on those areas of strength (Kolo, 1997).

5. Conclusion

Cognitive processing weakness no doubt is an impediment to learning. Although features of the problem are in most cases not conspicuous, but the devastating effects it has on clients cannot be over-emphasized. Expertise in the use of viable assessment tools and effective counselling approaches would help to accommodate clients within a normal learning environment.

6. Recommendations

1. Counsellors should endeavor to familiarize themselves with current assessment procedures for cognitive processing weakness.
2. Counsellors are advised to update themselves with current intervention strategies as they require direct involvement or 'playing along' with the client.
3. There should be adequate provision of assessment tools for identifying CPW.
4. Assessment of cognitive processing weakness should be carried out early in life so as to determine the status of students.

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