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CURRICULAR ADAPTATIONS FOR STUDENTS WITH HEARING IMPAIRMENT IN INCLUSIVE EDUCATION

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ABSTRACT

The purpose of this study was an attempt to give an insight and importance about the Curricular Adaptations for Students with Hearing Impairment in Inclusive Education. Generally, some people (mainly educators of students with severe disabilities) have narrowly defined the terms "inclusion," "full inclusion," and "inclusive education" to support the idea that all students with disabilities, irrespective of the degree or nature of their disability, get their suitable education in a regular classroom setting. The relatively recent integration of a small number of students with severe disabilities into regular classrooms serves as the foundation for this perspective. It must be founded on curriculum areas that call for special adaptations or strategies for students with hearing impairments. These areas include content, language, time table, presentation and illustrations. So, Curricular Adaptations is crucial for the betterment of the child with hearing impairment in order to survive in the inclusive society. So, it is suggested to the parents, inclusive school teacher and administrators must understand the need and provide the accessible environment by curricular adaptations.

KEY WORDS – *Inclusion, Integration, Adaptation, Academic Achievement.*

INTRODUCTION

In recent years, increasing focus on inclusion has brought significant attention from educators, policy-makers, researchers and economists, to schools and classrooms in India. Constitutional provisions, legal mandates such as the Right to Education (RTE), 2009, Persons with Disabilities (PWD) Act, 1995 and policy measures to make improvements in India's education system. The aim of all these initiatives is to enable effective academic and social participation of CWSN (Children with Special Needs). The classroom offers a dynamic, productive space where ideas, values, information, knowledge are shared and conveyed. Organization of the class and interactions amongst its fundamental components i.e., the students, teacher and curriculum-transactions, create potential for the group to move from a state of not knowing to one of knowing.

Creating an inclusive culture in classroom will involve attending to the curriculum, which includes the components of a course of study. These consist of the syllabus, textbooks and needed teaching learning materials, teaching strategies/processes and assessment and evaluation processes. In discussing the efforts in curricular development and reform, National Curriculum Framework (NCF) 2005 underscores the significance of making curriculum "an inclusive and meaningful experience for children" stating "this requires a fundamental change in how we think of learners and the process of learning." Attending to curriculum to define the classroom culture and the approach to the teaching-learning processes is thus a significant aspect of teacher's work in fostering inclusivity in their work with students.

Curriculum Adaptations

Curriculum adaptation involves differentiation to meet the needs of all students. The content, the teaching process, assessment and evaluation, and the physical environment may be modified to help students to achieve success in the classroom. The kind of activities chosen by the teacher, including group activities, must be flexible and reflect the background knowledge of small groups or individual students. The following shows the adaptations that are required in different areas for inclusive pedagogy.

However, the two terms adaptation and modification related to curriculum create some amount of confusion, perhaps misunderstanding. While adaptation refers to adjusting assessments, material, curriculum or classroom environment, to accommodate a student's needs to enable him/ her to participate in and achieve the teaching-learning goals, modifications involve making changes to learning goals, teaching processes, assignments and/or assessments to accommodate a student's learning needs. For example, use of audio tapes, electronic texts where available, having peer or a classmate to assist with class activities, or simply reorganizing seating of a child who is unable to be attentive, is easily distracted or distracts others in the classroom would be adaptations, changing the assignment to accommodate a student's learning needs: allowing use of letter-cards to spell words as a modification to saying the spelling aloud, allow the student with intellectual impairment to utilize concrete and/or more hands-on experiences, changing the conceptual difficulty level for some students would be modifications. In case of content, teaching and assessment, the following are some examples of curricular adaptations that indicate that these adaptations can be used for all children in the

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classroom and are not limited to CWSN. These strategies create a universal design of learning in inclusive classrooms.

Need for Curriculum Adaptations

As a result of Right to Education Act, 2009, the composition of classrooms is changing. Students with varying levels of abilities cannot, and should not, be taught in the same manner. Without adaptations/modifications, some children in your classrooms would never be challenged to perform upto their potential, while others may not be able to ever experience success. Curriculum adaptations involve effective teaching in the classroom that takes into consideration the individual needs of all children including CWSN and learning difficulties. It has also been seen that adaptations if carried out effectively facilitate both academic and social participation in class activities and can be used across various settings to facilitate success. Adaptations can also help in creating partnerships where parents and teachers can work together to evaluate/ implement adaptations.

Strategies of Curricular Adaptation for an Inclusive Classroom

In an inclusive classroom environment, quality education would depend upon a number of factors. Crucial amongst these are understanding of special needs of learners, infrastructural facilities, modified environment that is warm, welcoming and inclusive, trained motivated teachers, flexible educational content (what is being taught), strategies for teaching and evaluating that meet the needs of all children that focus on meaning, active learning and interaction, sufficient teaching time and its optimal use by teachers, access of every child to teaching learning materials and continuous onsite support to the teacher by specialists if required. The following are examples of some needs and strategies for curricular adaptations for CWSN.

Hearing Impairments (HI)

Although the learning needs of children with HI may differ in terms of severity of problem and the quantity, quality and timing of the support services the children receive, the following are some common needs these children exhibit across various subjects.

- Development/Acquisition of Speech and Language vocabulary, syntax and figurative language (like similes, metaphors and idioms);
- Understanding of abstract concepts;
- Reading and spellings (because of difficulty in phonemic awareness and speech sound discrimination);
- Communication Skills (speaking and listening, understanding);
- Mathematics;
- Organising ideas and;
- Communicating ideas.

Mathematics

1. Concept of time duration can be taught with simple activities. For example, observing the time taken by two peers during meal time and then assessing who had taken longer time to finish the food.
2. Two digit additions without carry over or with carryover can be demonstrated using simple objects like sticks or beads.
3. Word problems can be understood through real life examples/ situations or pictures.

Differentiated instructional strategies for mathematics for Students Who are Deaf or Hard of Hearing

Team members working with students who are deaf or hard of hearing need to carefully consider each student's unique needs and learning style, as well as the demands of the task. Strategies are offered to provide a starting point for thinking about possible adaptations. It is important to remember that all team members should have input into decisions regarding instructional strategies. Having a hearing loss may affect skill development in mathematics for a number of reasons. Mathematical concepts can be learned by children who are deaf or hard of hearing in the same sequence and manner as by their hearing peers (Meadow, 1980). Various factors may prevent children who are deaf or hard of hearing from successfully constructing mathematical knowledge:

They may lack general vocabulary and the basic mathematical vocabulary needed to be able to understand math concepts/processes. Hearing children are exposed to language from birth and have an understanding of everyday language. This serves as a base for developing an understanding and use of mathematical language. It is more difficult for children who are deaf or hard of hearing to acquire language and learning from their environment incidentally (from overhearing conversations of others in their environment, on TV, on the radio). Without this incidental learning, a child who is deaf may not develop even beginning math concepts such as "in front of/behind" or "heavy/light" without being formally taught them.

Communication with other may be difficult. If the child and others in his or her environment cannot communicate with each other effectively, they will not be able to engage in mathematical processes such as problem-solving, developing logic and reasoning, and communicating mathematical ideas. Problem-solving is especially difficult for children who are deaf as a sound language base is needed for putting observations into words or making predictions. Without communication skills, the child can be isolated in the learning environment and unable to participate in group activities and discovery (Ray, 2001).
Cognitive development may be delayed. Research shows that children who are deaf or hard of hearing have normal intellectual potential (Meadow, 1980). However, for normal cognitive development, particularly in a mathematical sense, a child must be introduced to a diversity of mathematical experiences along with a rich language base (Ray, 2001). This does not always occur in the home and in the educational setting.

Ways to help students who are deaf or hard of hearing succeed in mathematics

The following strategies are designed to promote access to mathematics content based on the Standards of Learning for

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students who are deaf or hard of hearing. It is important to remember that each child has unique needs and that decisions regarding instructional strategies should be based upon current and accurate information about the child's sensory functioning and on team input.

Instructional and Environmental Strategies

- Provide an enriched learning environment that will promote a wide range of meaningful mathematical experiences with opportunities for exploration and problem-solving.
- Be sure that there is someone for the child to interact with in the learning environment who can effectively provide not only the vocabulary to label objects but also a language model for expressing concepts and ideas, using the child's mode of communication..
- Partner with parents. Maintain on-going communication between the home and teachers so that math vocabulary and concepts are reflected and reinforced in as many different situations as possible. Make families aware of the limitless opportunities in the home to explore and discuss math concepts during daily routines, and make sure that the parents are able to communicate effectively in the child's chosen mode.
- Make use of multimedia approaches for visual representation of course content. Overhead projectors or PowerPoint presentations are preferable to blackboards, as the teacher does not need to turn his or her back to the students. This is especially important for students who are relying on speech reading, signing, cuing, and/or use of residual hearing for receptive communication.
- More than one mode of presentation should be used for concepts such as fractions. These may include manipulative, verbal, pictorial, and symbolic modes. Encourage students to translate between sign language, English and particularly the language of mathematics, and to make connections between all modes presented.
- Word problems may be introduced initially as informal stories with math facts through dramatization, using an overhead and manipulative, and then translating the action into a math sentence. Use of pictures, drawing sets, and visualizing or pantomiming the action in a problem can also be used by students to move from the concrete to more abstract representations of the problem.
- When using visuals, allow time for the child to view the board, overhead, or objects, then to watch explanation/instruction given by the teacher or interpreter, and only then, allow students to offer responses. A hearing person can view visuals and listen at the same time. Children who are deaf or hard of hearing and rely on visual communication through sign language, cued speech, or speech reading must process information sequentially rather than simultaneously.
- Pre teach vocabulary for coming math lessons in context. Collaboration with the speech/language pathologist in this effort can be beneficial. Remember, many children who are deaf or hard of hearing do not learn words incidentally.
- For students who sign, ensure that all involved are consistent in the signs being used. Conceptually based signs should be used and inventing new signs for new vocabulary should be avoided.
- Word problems may be especially difficult for some students who are deaf or hard of hearing because of the literacy level needed to comprehend the problem and what is being asked of the student. Having the interpreter sign the problem may be an appropriate accommodation for some students.
- Encourage students to process information at a deeper level through questioning.

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