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An activity based approach to education of students with severe and profound mental disabilities

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Students with severe and profound mental disabilities (SPMD) often present difficulties with speech and language, as well as difficulties with independent movement. Such difficulties lead to reduced opportunities for diversified experiences and interactions with people and activities, creating difficulties to their communication and language development.

The inability to communicate properly, in turn, increases difficulties in accessing the world and engaging in meaningful experiences, reducing development and learning opportunities.

A framework for intervention with SPMD

At the time they start kindergarten, normal children have developed a set of skills resulting from incidental learning in frequent and contextualized experiences. They speak (though speech may not yet fully developed), they understand other people's language, they know family spaces (where they eat, where to bathe, where to go shopping), they know the actions and activities in such spaces, they know the material used for each activity, they know the relationships between spaces, materials, people. Their cognitive, social, autonomy, and language skills, constitute the basis of kindergarten activities which develop, increase and systematize incidental learning done before starting school.

When a child with SPMD is included in kindergarten he has not such an array of experiences. As we said above, this child is limited in the ability to explore and participate in activities and also in the ability to understand information conveyed by adults or by the environment.

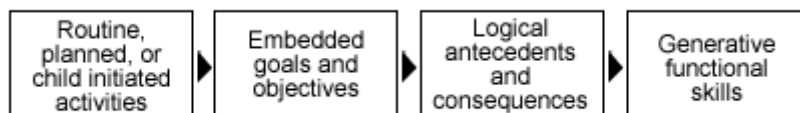
These limitations have devastating effects on development and require that intervention strategies are targeted to meet those needs.

Most intervention approaches for people with SPMD have in common the need to be developed in context and to be supported by activities that are part of the student's life ([Bricker & Cripe, 1992](#), [Amaral et al, 2006](#)). Developing such approaches requires from schools an adaptation which often goes beyond what schools are normally prepared to offer his students.

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Education of a student with SPMD should include opportunities for diversified learning experiences which enable their participation and activity in the community, facilitated by processes of inclusion in the family, school and society. (Amaral & Nunes, 2008). These inclusion processes must take into account the need for a functional communication that allows the expression of functions such as requests, rejections, comments or expressions of humor and affection without which students' participation in the community is severely compromised.

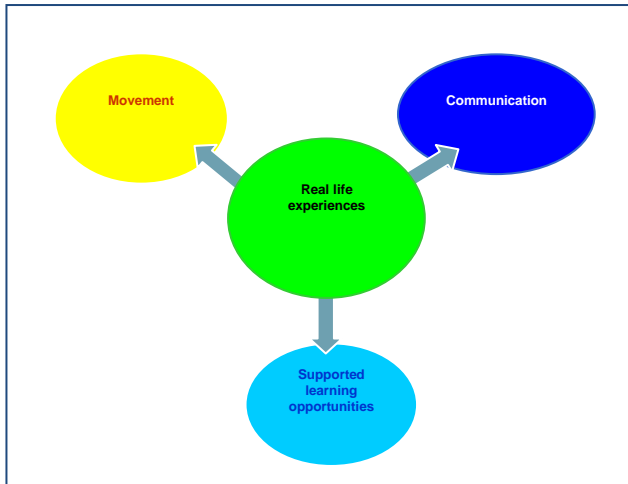
Educational approaches for students with severe and SPMD tend, therefore, to concentrate on opportunities for meaningful activities that help involve the student in meaningful interactions in order to support understanding of the world and the exchange of messages. Real life activities are, in our view, an effective way of designing students' learning programs supporting and Activity Based Approach defined by Brown, Collins & Duguid (1989) as an intervention process in which both the immediate and larger socio-cultural environment influence students' development. In this type of intervention it is assumed that students learn best in functional and meaningful activities in which they are actively engaged. Experiences provided to students are client-initiated, routine, or planned activities and they should 1) emphasize environmental transactions, 2) be meaningful and functional, 3) be developmentally appropriate and 4) designed to produce change in repertoires. In this approach, and according to [Bricker & Cripe, \(1992\)](#) activities should increase opportunities for the student to act on get feedback from the environment. Such activities should be organized as routines as a way to increase participation and help support memory of actions.



(Bricker, Pretti-Frontczak, & McComas, (1998)

Because of their specific characteristics, most students with severe and profound disabilities need support in order to be involved in real life experiences. A framework for intervention (Fig 1) includes, therefore, the need for *communication*, so that the student interacts with people in the environments, the need for *movement* so that he can actively discover and experience activities, and the need for *support in the learning process*, since incidental learning rarely occurs in the lives of students with SPMD.

Image 1 - A framework for intervention



Real life experiences – these are experiences belonging to the normal life of a student at a given age.

Initial student assessment should include a repertoire of the activities the student does daily, weekly or occasionally, as well as a repertoire of the activities that he could be doing in the near future. Goals and Objectives for intervention are designed through a discrepancy analysis between what the child can do in the activity at a given moment, and what he can be expected to do in the future. Levels of support are also important and necessary to identify in describing what the student is expected to do in the future.

Movement – for a student to be actively involved in an activity he/she needs to be able to move around, explore and realize movements that an activity requires. Students who do not move independently should be supported by significant adults who help them move and act in the environment during a given activity, interacting with them in order to support the development of communication abilities by describing, explaining and retrieving meaningful information.

Supported learning opportunities – most students with SPMD do not learn incidentally. Their ability to receive and interpret sensory information is often impaired and they need someone who supports their learning process by selecting meaningful activities and involving them in the activity. The role of an adult in a learning process of a student with SPMD includes 1) identifying the best activities for the student to develop and learn, 2) identify what the student can do on his own and what support does he need, 3) Identify

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people involved in the activity who can act as meaningful partners, 4) identifying what parts of the activity the student can do in the future, 5) make sure that all skills learned in an environment are transferred and generalized into new situations so that concepts can be developed, 6) select and use the best strategies for the student to learn and inform all partners about such strategies.

Communication – being involved in an activity creates opportunities for the student to interact with people in a given environment. This includes initiation opportunities, turn taking, requests and refusals, expressing emotions and the use of different forms of communication such as signs, objects or movements.

Initial student assessment should include an analysis of communication forms used in each activity, as well as the communication functions conveyed, together with a list of forms and functions to develop in the near future according to each activity. It should also include initiation and turn taking opportunities within each activity.

In this process, communication stands as a key point in intervention with students who do not speak allowing for messages to be exchanged and meaning to be clarified.

An intervention approach

Planning for intervention and communication with children with SPMD involves, according to our own reading of development and communication theory, an integrated analysis of four aspects: 1) the activity, 2) the context and structure of the activity, 3) the development of a time structure, and, 4) effective strategies. The nature of concerns related to each of these four aspects is displayed in Table 1.

Table 1 – Intervention

| What to do | How to do |
|--------------------------------------|--|
| Selection of an activity | Real life activities Providing opportunities for child's direct involvement Enjoyable, frequent and useful for life |
| Context/Environment structure | Organized in a predictable way Involving easy access and movement Related to the activity |
| Anticipation/Time structure | Routine organized activities Calendars indicating time for the activity Anticipation boxes explaining sequence of events |

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| What to do | How to do |
|---|---|
| Effective communication strategies | Adapted to the child's level of social interaction Adapted communication forms Opportunities for use of different communication functions Opportunities for initiation Turn taking Opportunities for concept development |

Selecting activities

Through the use of and activity based approach, already mentioned, students are encouraged to develop concepts which arise from frequent actions in significant environments and are supported by the use of objects of reference as tangible symbols which help develop representations of the real world (Rowland & Schweigert, 2000).

Planning to use real life activities implies 1) the selection of frequent and useful activities, 2) the selection of activities and actions within activities which the student can do in the future, 3) the level of support necessary to develop the activity and, 4) development of an action plan in which student's participation is defined, both in terms of movement and communication.

Context and environment structure

Making sure that activities happen in their natural contexts helps students develop concepts related to the activity. Activities need to be organized in a structured way, to help students understand steps in the activity and increase their ability to predict the sequence of necessary steps. Such organization includes providing for an easy access to people and materials during the activity through active or assisted movement. Students learn more if the context is clear and the environment is adapted to the activity. Communication about activities is easier and concepts are better developed if students are able to combine context, actions and the communication involve in an integrated way.

Anticipation/ time structure

Anticipation refers to knowing that something will happen before it has actually happened. Both vision and language play a major role in the development of anticipatory behaviors. Children learn that it is time to eat when they see mothers set up the table, and know they are going out when mother says "let's go to the park".

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In the absence of visual abilities and of spoken/ sign language, the development of an effective system for anticipation and time structure development requires the use of strategies which involve: 1) routine organized activities which provide for anticipation, 2) the use of anticipation boxes explaining sequence of events during an activity and 3) the use of object or picture calendars indicating activity sequencing, both in terms of the steps required to perform the activity and in terms of the number of activities performed throughout the day, 4) the use of simple language together with the student's individual code system.

Effective communication strategies

Teachers use different strategies to help students interact throughout the activity. According to the child's socio-emotional level one can expect some students to be more involved in activities than others. For students who do not engage in joint attention and do not show interest in objects, participation in an activity may be the only goal. For such students, the teacher's role is, essentially, to make sure that the child has an opportunity to experience all steps of the activity with maximum support and draw the child's attention to what goes on during the activity. Students who are interested in the world around them and who can engage in joint attention processes, can be engaged in the activity and learn new concepts and actions during the activity, using the necessary level of assistance, so that they learn to be more and more independent. Effective communication forms are essential to help the child anticipate, and the use of diverse communicative functions supports further communication development. Pacing and interrupting an activity known to the child and waiting for students' responses are useful strategies to help increase initiation, turn taking and joint attention. Real life activities are an important basis for concept development, although the lack of incidental learning may be seen as a limitation. Students may not be able to easily transfer and generalize information which supports concept development. Nevertheless, good planning can ensure that information collected in one setting can be used in another setting and that references used to identify information in one setting are used in the new setting to represent the same concepts and help concept development. In this process, an effective communication system that fits the child's level of symbolization is important, so that labels can be used to refer to the learned concepts.

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