

VOICES OF AMI TRAINING

Aids for Cognitive Development

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Cognitive development allows children to gradually acquire knowledge and understanding of the world around them. Day-to-day activities that take place at home and in our Montessori environments significantly help in building a strong foundation for this development.

Through the daily life activities that we do to take care of ourselves and our environment, the child, in addition to spend valuable time with you, can develop complex cognitive skills known as executive functions. Among other things, these skills allow us to have critical thinking, make decisions, and regulate our thoughts, emotions, and behaviours, to adapt to different environments or situations. There is growing evidence that executive functions such as decision-making, and our ability to inhibit impulses, are greater predictors of our success in life than IQ tests.

There are three executive functions that serve as the foundation for all others. Working memory, impulse control, and cognitive flexibility. Children are not born with these skills, only with the potential to develop them.

Our ability to **self-control**, for example, begins to develop in the first years of life, even during the first few months, but it is not fully established until after adolescence and early adulthood. This ability allows us to subdue the urge to abandon a task, especially after failing, and continue working towards the goal until completion. While it is true that this ability is partly genetically inherited and that it naturally matures with age, experiences in the environment where the child can put this skill into practice, help him strengthen it and develop it exponentially.

The same goes for **working memory** and **cognitive flexibility**. Both skills develop from experiences in the environment where the child is repeatedly required to use them. Working memory is the ability to retain information in our mind while working on a task, for example, following the sequence of steps needed to peel and slice an egg. And cognitive flexibility, which is our ability to flexibly shift the focus of our attention to adjust to unexpected situations, for example, knowing that we can solve the same problem using different strategies, according to what arises in the moment. In children, this skill predicts how quickly they will learn to read, solve math problems, and general academic success.

These three core cognitive skills help children and eventually adults to persist in a task, even when obstacles are encountered, self-regulate, adjust to the demands that arise while perusing a goal, and ultimately to succeed in whatever we set out to do.

When a child does a Practical Life activity such as cooking or washing dishes, they are putting to practice their growing cognitive skills. For instance, when washing dishes, the child will have to memorize and follow a long sequence of steps to succeed (working memory), he will have to adjust to unexpected situations to solve problems, for example, find a way to rinse the dishes, despite having put too much soap (cognitive flexibility), and finally walk slowly to not spill water on the floor while carrying a bucket (impulse inhibition). With repetition and practice, the child will increasingly regulate his impulses so that he does not pour so much soap or spill water, will make decisions to achieve a more effective way to wash dishes, and apply this knowledge to wash different dishes depending on their size and dirtiness. All of this requires using different executive functions that will eventually lead them to critical thinking, which is a great gift for our children.

It is important that these experiences offer the child the possibility to direct his or her own actions, so the adult must be able to connect the child to the activity, withdraw to allow him to explore, make mistakes, make decisions to resolve them, and direct his attention to regulate his impulses to complete the activity successfully. Continuous adult intervention slows down the possibility of developing these skills. With slightly older children and once the activity has been completed, the adult can promote reflection on how things have been done and could be done next time, to help the development of cognitive flexibility.

In addition to these activities, it's important for adults to model how to self-regulate and deal with stress successfully. Children in the first years of life learn from the people around them and make these experiences their own.

And finally, shared experiences that encourage creative play and social connection, such as having conversations, reading books, putting puzzles together, and playing board games for young children. These activities together are undoubtedly the best way to help your child develop their executive functions from an early age. Remember that early experiences help build the foundation of your child's personality.

ABOUT THE AUTHOR

Alejandra Rosas is an AMI 0-3 Trainer and the Director of Training at the Montessori Stoppani Institute in Tijuana, México and Los Angeles, CA. Alejandra has been part of the Montessori Community for over 25 years. She holds AMI 0-3 and 3-6 diplomas, and has worked at both levels, serving countless young children and their families as they navigate their children's development. Alejandra works internationally offering 0-3 courses and workshops for teachers, parents, and school administrators. In addition, she serves as an examiner, and consultant for AMI. Alejandra enjoys the most, traveling and having new experiences with her loving family.

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