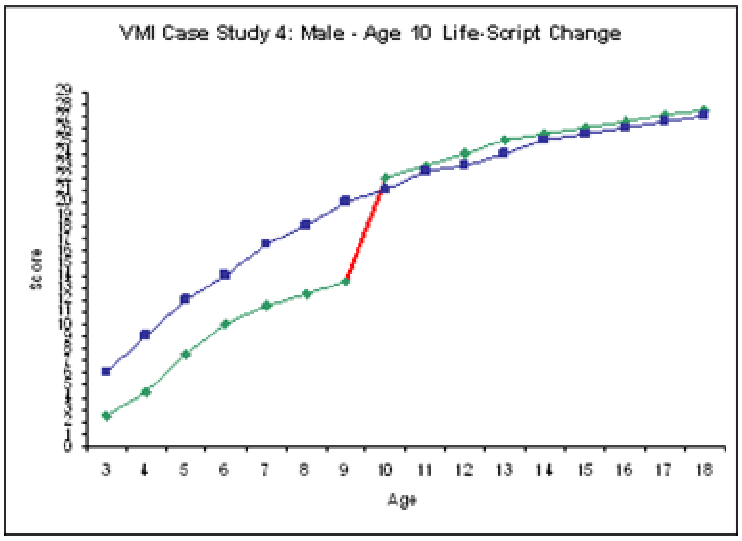
Survey of Literacy Capabilities

for School Children

By

The British Institute for Learning Development

Dubai



Overview

The British Institute for Learning Development can conduct a Literacy Assessment of the literacy capabilities of children in your school for both public and private schools. Developing the foundations for learning - of a child's natural cognitive abilities and desire to learn - which will give impetus to their education and success.

The Assessment can be for the whole school, classes, or individuals within your school.

The Benefits of a Literacy Assessment for your school would be to:

- Give an overview of the literacy level of the children in your school.
- Provide results which will have implications for curriculum development, learning support programmes, learning development techniques, and teacher training.

- Help your school design an intervention programme to address and accelerate learning development.
- Set the basis for teacher training courses to aid teachers in learning development.
- Develop principles of 'class-room friendly' learning and 'brain friendly' learning to help teachers be more effective.
- Review and contribute to curriculum development in your school
- Consideration of learning development strategies for children with learning difficulties and special needs.
- Create a data base of literacy development resources for teachers.

The Benefits of a Literacy Assessment for the children and parents of your school would be:

- To specifically assess children's cognitive capacity to read, write and think.
- To assess the literacy skills of children as a cognitive function with the aim of increasing children's learning capabilities.
- Identify specific learning difficulties that parents may want to further address through assessment and/or coaching.

Assessment Programme

The Assessment Team will spend some 2 hours with each child in your school and take up to 5 hours to complete the process of child-interaction, interpretation, score scaling, report writing and feedback.

The Assessment Programme would use several international standard assessments in order to give results that are both internationally recognized and provide high quality benchmarks of learning capabilities. The assessments to be used are:

- TVPS (Test of Visual Perception Skills)
- VMI (Beery Visual Motor Integration)
- WYATT (Wechsler Individual Achievement Test)
- Ayres Clinical Observations Test

Several assessments are used in conjunction to allow a comparison of the results and to gain an accurate profile of children□s cognitive and literacy abilities. It also allows a base of children□s abilities to be established in order to identify and validate universal significant improvement in the children□s learning and cognitive abilities. It also provides a basis for extending the studies to children in other schools.

Presentation of Results

The Results of the Assessment would be made available to both the school and parents.

For parents, we would provide an individual feedback to discuss each child's results.

For the school, we would make a presentation of the results, including a formal report. It would also be possible to make a formal presentation to the school □ for teachers, or for parents and teachers □ to discuss the results, what they mean, and the implications for the learning development programme of the school.

Teacher Training

The results of the Assessment will allow for the identification of the kind of teacher support needed in schools. This will subsequently lead to consideration of teacher/therapist training requirements and possible specific training courses.

APPENDIX A

Literacy Development

Literacy skills play a fundamental role in enabling individuals to function to their full capability in society and in the economy. Without literacy, individuals cannot take a full and equal role in social and political discourse: they become less than equal members of society without the basic tools required to pursue their goals. Thus, in any attempt to build a better society, the distribution and generation of literacy is of fundamental importance.

From the time children are very young, there are four key factors that determine a child's potential to learn: their natural ability, the strength of their desire to learn, their parent's attitude to learning and the learning environment.

While the influence of parents and the learning environment are important issues in their own right, where home and school environment are at least inducive to learning, it is the development of the foundations for learning; of a child's natural cognitive abilities and desire to learn, that will give impetus to their education and success. Identifying children's cognitive capabilities and literacy levels will allow us to design an intervention programme to address and accelerate learning development.

The ability to read and write is dependent upon the efficiency a child's neurological function toprocess and integrate information. Literacy is specifically dependent upon a child's perceptual abilities and their visual-motor integration ability.

- There is a direct relationship between visual perceptual abilities and literary ability. As seventy percent of sensory input for humans is visual, it follows that vision and perception are fundamental neurological functions to the process of learning.

- It is visual motor functions that are fundamental to learning development as the sensory-motor scheme constitutes the basis for the operations of thought.

Learning is implicitly a neurological function and it is important to develop a child's neurological efficiency in order to increase their learning ability. Neuro-efficiency is increased by improving the sensory process and integration of the brain. As the brain is more able to process and integrate information through its sensory system so, in consequence, there is an improvement in learning ability.

Early assessments can indicate the future ability of literacy for children. Both the Test of Visual Perception Skills by Gardener and the Beery Visual Motor Integration test are considered reliable indicators of predictable academic performance. In particular, the Beery assessment has been consistently used to assess reading ability and to predict the reading capability of a child at a future age. The forecast quality of these tests also means that it is possible to identify specific learning difficulties that will have a direct impact on academic capability and performance. Yet, where it is possible to improve neuro-physiology, academic capability and performance can also improve and a 'new' prediction of ability be seen.

Where an intervention programme to improve neuro-efficiency is introduced, it is possible to see accelerated development take place which will increase the child's non-verbal intelligence scores, as well as their academic performance and literacy skills.

APPENDIX B

Learning Difficulties

As the brain processes and integrates information through its sensors, it is able to plan and organize behaviour in order to make an adaptive response in the ongoing process of learning.

However, where the brain is not properly receiving sensory input, and/or not integrating the sensory information properly, learning is belated. That is, if the sensory system is not functioning as it should, or where sensory information is not appropriately integrated, there is said to be a learning disorder.[1]

Many people suffer from learning difficulties due to problems arising from the malfunction sensory systems of the body. A 'learning difficulty' can result from a combination of sensory integration and processing dysfunctions. Famous people such as: Thomas Edison, Winston Churchill, Richard Branston, Whoopi Goldberg, Cher, and even Albert Einstein is believed to have had a 'learning problem'.

For school age children, studies in both the US and the UK indicate that up to 20% of children have some form of learning difficulty and it is just as high, or higher, here in the UAE.

The British Institute for Learning Development after 6 years of research in the UAE estimates that up to 25% of national children are hindered in the academic progress because of learning difficulties that need to be addressed.

Children's intellectual aptitude progresses over a spectrum of capability, and it is possible to perceive learning as the process of increasing intellect. Developing children's learning capabilities, accordingly, is fundamental in developing children intelligence.

Intelligence is something we develop through learning as the brain is given both opportunity and stimulation. The brain, as the most complex organ in the body, with some 100 billion cells, has an infinite capacity to learn. In order to learn, a child needs the 'just-right' interaction-learning opportunities to suit their stage of development. A child also needs to be ready to learn. That is, it is no good trying to get a child to read or write if their mind and body is not ready for such activity.

The fundamental problem with mainstream school education has been the focus on developing performance (reading, writing, maths, comprehension) without first developing learning capabilities. High-level functions, such as writing, drawing, language, and reasoning, are dependent upon the development first of low-level functions and the integration of sensory systems of our bodies. Virtually every child gains from the development of their sensory systems, especially those children who are not up to there chronological age development expectation.

Research by the British Institute for Learning Development in Dubai over the past 5 years has shown that it is possible to correctly assess the cause of a child's learning difficulty, and second, implement a coaching-therapy programme to increase the neuro-efficiency of the brain and improve cognitive capability and intelligence.

APPENDIX C

British Institute for Learning Development

The British Institute for Learning Development is the only one of its kind in the Middle East and is perhaps unique across the world offering services to children to improve their learning capabilities and intelligence within a school programme.

Children attending the British Institutes programme have been assessed as having learning difficulties and receive coaching 7 times per week as either individual or group sessions. In this way, a team of personal coaches, using sensory integration therapy, work along side of teachers to offer the children individual learning programmes (ILP): The ILPs focus on increasing childrens learning capacity as well as their learning performance. The programme is called the Sensational Learning Programme.

The British Institute uses neuro-sensory processing and integration therapy to improve learning efficiency. Sensory integration therapy has been used in America for the past 30 years.

There is an opportunity now in the UAE to contribute to the body of research on neuro-development of children and to develop a model of education based on 'how children learn' (which has implications for curriculum development and best-practice teaching techniques).

Results of a research conducted by the British Institute in 2006-08 show an average improvement for children of 3 grade-levels of ability in 1 year, where less than 1 year□s improvement would have expected without the sensory integration coaching.

The British Institute's learning programme is based on the belief that children's learning capabilities and performance can improve where children first receive therapy to develop the foundational sensory systems of the mind and body.

The Institute's gives each child individual attention to track and stimulate their learning potential. In order to advance a child's capabilities, and in consideration of their individual abilities, children will be given coaching on a daily basis. The objective to this neuro-development approach is to give a child a 'just-right challenge' within their reach and thereby allow the child to succeed, with a direct effect upon their self confidence and self esteem.

It is important to note that children with average and above average intelligence can also have learning problems and display a gap between their ability and their achievement. When a child has a neurological processing delay, developmental and learning problems result. Attention problems, modulation problems, fine and gross motor development problems and bi-lateral integration problems, are several of the neuro-functional difficulties that can hinder a child's developmental progress.

Efforts to make the most of children's intelligence have until now been focused mainly on teaching methods. An appreciation of neurological development and motor development as fundamental to development of intelligence has, however, been neglected in the education debates over traditional versus progressive teaching. Now neuro-science is taking over the classroom.

Recent research by the British Institute has shown children's visual perception and visual-motor integration scores increase dramatically in just one year effecting their academic performance and particularly their literacy.

The team of professionals working with the Institute include:

- Sensory Integration Therapists
- Speech and Language Therapists
- Audiologists
- Psychologists – both educational and counselling

- Teachers

The Institute uses nine assessments to gauge and track children's development:

- Sensory Integration Praxis Test SIPT
- Sensory Profile by Winnie Dunn
- Visual Motor Integration Test VMI
- Test of Visual Perceptual Skills TVPS
- Ayres Clinical Observations
- Wechsler Individual Achievement Test WIAT II
- Test of Auditory Processing Skills TAPS
- Clinical Evaluation of Language Fundamentals CELF
- Wechsler Intelligence Scales WISC IV

Once assessment results show children's learning capabilities, an individual learning development plan and programme is drafted for each child.

The programme works on developing a child's foundational, or lower level, sensory systems in order to develop fundamental neuro-physiological abilities before tackling the higher level skills of reading, writing, comprehension and mathematics.

APPENDIX D

Accelerated Learning Development (Article)

Introduction

The sensory systems of the body give a constant flow of information to the brain about the physical conditions of the body and the surrounding environment. The brain receives, perceives, organizes and responds to this information. The brain must integrate the information from its sensors in order to move, learn and behave in a regulated and productive manner. Where the sensory system is not functioning as it should or where sensory information is not appropriately integrated, there is said to be learning disorder.

As the brain processes and integrates information through its sensors, so the brain is able to plan and organize behaviour and then adapt, or change, behaviour, which is called learning. Each person's brain is different due to a combination of processing ability and experience. But every brain is engaged in the process of learning on a continual basis.

The hypothesis is that where the brain is not properly receiving sensory input, or not integration the sensory information properly, learning is belated. Further, that because there is plasticity with the central nervous system (brain is moldable) and because the brain consists of systems that are hierarchically organized, it is possible to stimulate the learning process.

Sensory integration theory and sensory integration therapy to stimulate and increase the learning process was primarily developed by Jane Ayres in the 1970s and 1980s in the United States. Ayres exacting work on neurological function and the process of learning has led to a developed understanding of 'intelligence' as an outcome of sensory perception, integration, and processing. And, to a field of work to enhance the learning

through sensory integration therapy and thereby help children with learning difficulties progress toward higher functioning brains.

Sensory integration is here defined as the unconscious process of the brain to organize information detected by the body's senses. To give meaning to what is experienced by sifting through all the information and selecting what to focus on. Sensory integration allows us to act or respond to the situation we are experiencing in a purposeful manner. The body and mind cannot function without sensory integration. It forms the underlying foundation for academic learning and social behaviour.

By interpreting the information received from the sensors, the brain gives meaning to the information. The sudden sounding of a car horn, for example, can stimulate fear and create momentary paralysis or quick body responses to move. Thus, with accumulated experience we develop adaptive responses; that is, purposeful, goal-directed responses, to sensory experiences. Put simply, the brain is a sensory processing machine.

Sensory integration begins in the womb as the foetal brain senses the movement of the mother's body. Play is the primary means of learning and development for a child as they organize the sensory information received from interaction with their environment and things around them. The foundational sensory systems develop followed by more complex integration of information for functions such as reading.

Learning Disorders

A learning disorder is understood as essentially sensory integration dysfunction. While there is a variance in sensory perception and integration abilities, sensory integration is not a matter of either-or: no one has perfect sensory integration or none at all. Some people have especially good sensory integration and others are just average or have poor sensory integration. If the brain is not integrating information well, then difficulty in behaviour (as seen in motor development or body performance), learning and academic performance result. It is estimated that up to 15% of children in the USA have enough trouble with sensory integration to cause them to be slow learners and have behavioral

problems. Children with such problems may seem typical in most things or have average to above average intelligence.

Sensory integration theory seeks to explain problems in learning and behaviour that cannot be attributed to central nervous system damage of abnormalities. Learning difficulties are understood as related to dysfunctions in central processing of sensory inputs.

Theory of Sensory Integration Therapy

Sensory Integration therapy is built on the theory that intervention can enhance sensory integration. Children with learning disorders can benefit from sensory integration treatment procedures. Intervention programmes to stimulate sensory integration are based on the initial studies by Jean Ayres that show significant gains can be made in behaviour, and learning capabilities through sensory integration therapy.

Sensory integration theory postulates that the brain, through its sensory systems is in interaction with its environment so that the process of reaction-interaction-learning is cyclical. The elements of the cycle are: sensory intake, sensory integration, planning and organizing, adaptive behaviour and learning, and feedback.

Sensory integration therapy is built on five assumptions of neurological development.

> Assumption 1: Neural Plasticity. Because brain structure has the ability to change or be modified, sensory integration intervention procedures will effect changes in the brain.
>
> Assumption 2: Developmental Sequence. Each learned behaviour becomes the basis for more complex behaviours in the sequence of development. Sensory integration therapy seeks to provide stimulation at certain brain levels enabling them to mature.

Assumption 3: Nervous System Hierarchy. While the brain functions as a whole, 'higher level' integrative functions evolve from, and are dependent on, the integrity of 'lower level' structures and sensorimotor experience. This assumption includes the recognition that systems interact and that both the cortical and subcortical structures contribute to sensory integration.

Assumption 4: Adaptive Behaviour. Inducing an adaptive behaviour promotes sensory integration, and, in turn, the ability to produce and adaptive behaviour reflects sensory integration. An adaptive behaviour is one that ids purposeful and goal-directed and enables the individual to successfully meet the 'just-right' challenge and learn something new.

Assumption 5: Inner Drive. There is an inner drive to develop sensory integration through participation in sensorimotor activities. Where a movement is successfully learned there is a motivating influence to learn more and thereby seek out self-actualizing and growth-promoting activities.

With an appreciation of these assumptions about the learning processes of the brain, sensory integration therapy programmes are designed to help children learn. Initially, assessments are carried out to determine the nature of dysfunction. The tactile, vestibular and proprioceptive systems are assessed along with motor and fine development, visual perception and integration, bilateral integration and auditory processing.

On the basis of the analysis of the results of assessments, therapist identify sensory systems that need attention and design interactive programmes to play with the children and direct just-right stimulation to enhance sensory system input and perception.

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[1] Note: The implication is that a learning disability is not the result of poor academic teaching and will not be alleviated by increased or intensive academic tuition.

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