

# Neuro-developmental Differentiation-

## The science of effective differentiation

### Andrew Fuller

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Neuro-developmental differentiation (NDD) takes our knowledge on resilience and positive education into classrooms where it can make the most difference. One of the most powerful ways we can build resilience is to have students discover how to be successful learners.

Based on neuroscience, NDD looks at which parts of learners' brains are developed as strengths and which are yet to develop. It then looks at ways to utilize learning strengths to overcome or supplement areas that are yet to develop.

The aim is for every student to develop an individual learning plan and identify their strengths as well as blockages.

Students and their parents can assess learning strengths for free on [www.mylearningstrengths.com](http://www.mylearningstrengths.com) and receive a letter outlining their top learning strengths and an area to overcome.

A more complete report is available at a nominal fee. This outlines students' ability to input, process and output information. Input refers to the ability to focus and absorb new information, processing the ability to organize information and outputs refers to the retrieval, expression and communication of knowledge.

Eight brain areas are assessed. Ideally students then use their strengths to build up other areas of their learning. The report also links strengths with potential career areas.

#### The Learning Strength Areas

##### Spatial Reasoning

Some of our best thinking occurs without words but in shapes, objects, and diagrams. Spatial reasoning links strongly to number smarts.

##### Number Smarts

In many schools, thinking about numbers has been quarantined to the maths classroom. Students should be using hands-on materials- flow charts, blocks, dice, dominoes to think about numbers in every subject.

##### Word Smarts

Our most sophisticated word and language skills involve analysis, use of tone, rhyme, effective communication, clarity of thinking, creativity, critical thinking and evaluation.

##### Planning and Sequencing

This is essential for successful studying and decision making.

Developing ways to plan, to weigh up alternatives ways of achieving an outcome, to consider consequences of actions is a remarkable skill. Many people don't do this. Instead they act on the first thing that pops into their mind and if that doesn't work they then act on the next thing that pops into their mind. A world that doesn't plan can waste a lot of energy doing things that don't need to be done.

## **Thinking and Logic**

Our most sophisticated thinking and logic skills involve reflection, evaluation, similarities and differences, reasoning, communication, creativity and problem solving. It is our use of thinking and logic that transforms information into knowledge and knowledge into wisdom.

## **Concentration and Memory**

Our most sophisticated concentration and memory skills involve noticing and focusing on fine or small distinctions, difference, pattern detection, mental information processing, creativity and recall. These skills correlate powerfully with academic success.

## **Perceptual and Motor Skills**

Our most sophisticated perceptual and motor skills involve perceiving accurately, integrating our senses and coordinating our body. This directly determines our ability to learn as new learning begins with sensory perception.

## **People Smarts**

Our most sophisticated people skills involve emotional intelligence, people reading, emotional regulation, knowing how to calm ourselves and others, rapid de-escalation methods, stress management, constructive feedback, motivational skills, compassion, relationship building and maintenance and clear communication.

Without these skills success is hard to attain as humans are exquisitely sensitive to the presence or lack of people skills in others.

Students can have wonderful strengths in all of the other areas but if they lack people smarts it can all come to nothing. These skills can set you up for success or destroy even the most promising of careers and relationships.

## **Identifying Learning Strengths**

By identifying learning strengths you can capitalize on success in that area and cross-fertilize those skills into other learning areas.

While the letter that is sent after the completion of the learning strengths analysis will be sufficient for many people, a full report is also available. There is a nominal fee for this.

The full learning strengths report outlines all of the person's learning strengths and links them to strategies and careers. It also identifies the learner's capability to input and absorb new information, process and organize information and output or retrieve and communicate knowledge.

Profiles for classes or year levels are also available.

Andrew can be contacted at [www.andrewfuller.com.au](http://www.andrewfuller.com.au) or at [inyahead@satlink.com.au](mailto:inyahead@satlink.com.au)

The Learning Skills Assessment can be accessed at:

**[www.mylearningstrengths.com](http://www.mylearningstrengths.com)**

This approach is most powerful when school staff receive training in neuro-developmental differentiation. This can be arranged by contacting:

**[www.andrewfuller.com.au](http://www.andrewfuller.com.au)**