**Book Review for Dyspraxia Foundation**

**Autumn 2010**

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**Word Count – 572 (main text)**

***Smart Moves: Why learning is not all in the head***

**By: Carla Hannaford, Ph.D.**

**Publishers: Great River Books, Utah**

**2nd Edition, 2005, 271 pages**

**Paperback £15.19**

**ISBN: 978-0-915556-37-3**

The author is Carla Hannaford, Ph. D., a biologist and educator with more than thirty years of teaching experience including practice with children with learning difficulties. She is an internationally recognised educational consultant and has contributed over one hundred articles to educational and science journals and specialist magazines. She is the author of several other books, all related to the development of learning. Hannaford is well qualified to discuss the importance of movement in the learning process and *Smart Moves* has a comprehensive reference section from which she has drawn, and includes a number of case studies.

The book is well structured. The introductory chapters focus on how learning takes place, including the important role of sensory experience and emotion. Hannaford’s background as a biologist enables her to explain clearly how neural networks develop and the important role of sensory experience in the development of the vestibular system. She discusses in some depth the role of the brain’s two hemispheres and compares and contrasts logical learning and thought with gestalt learning and thought. The important role of imagination and play in the development of the limbic system is highlighted.

The main section of Hannaford’s book relates to the significant role of movement in the learning process, and when she begins to explain how movement leads to learning, the reader is well-prepared and has a good understanding of the main issues, due to her preliminary discussions of human physiology. She uses many fascinating examples and case studies drawn from a variety of different cultures and contexts to advocate the importance of movement in the learning process. Her ideas have important implications for intervention and ‘motor control programmes’ for children with special educational needs, including dyspraxia and dyslexia.

Although Hannaford spends a considerable amount of time discussing the ‘Brain Gym’ programme, she also makes mention of other programmes of integrated movements which activate both gross and fine motor areas of the brain in order to elaborate nerve networks. Examples of a variety of cross-lateral movements are given.

*Smart Moves* includes a section on nutrition and learning. Although Hannaford’s discussions here are interesting, they do not go into enough detail and anyone wishing to find out more about this subject should look beyond this book to do so. This is a complicated area and one which requires further specialist research.

In the final stages of her text, Hannaford discusses the effect of stress on learning and also draws on several inspiring examples of successful educational models from other cultures. She uses an interesting phrase to describe the reactive functioning of the brain to stress from environmental, developmental and other influences that can bring about survival orientated behaviour – ‘Stressed out and survival orientated’. This is when ‘chronic exposure to stress inhibits full brain development and learning.’ Hannaford’s explanation of the Danish educational system describes an inspiring model where children are able to more fully develop their learning through an emotional, sensory and motor-orientated approach.

*Smart Moves: Why learning is not all in your head* is a useful book for those who wish to explore the importance of movement and learning, including kinaesthetic intelligence further. As individuals affected by dyspraxia have ‘an impairment or immaturity of the organisation of movement’, this book will provide some thought provoking ideas for further development of motor skills. Hannaford’s observations are useful, particularly in highlighting areas for further research and careful consideration about the ‘goodness of fit’ of our educational systems.

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