



Smart Learning Solutions

Remedial Teaching with a Difference



Licentiate of The Institute of Neuro-Physiological Psychology



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Day course for Teachers in use of: **The INPP School Programme**

INTRODUCTION

There is a growing body of evidence to support the long held theory that control of balance, motor skills and integration of early reflexes *are* linked to academic achievement. Now, not only can these problems be identified by teachers within the school system, but a series of studies carried out in schools in the United Kingdom since 2000¹ has shown that, in many cases, something can be done about them. The remedy is available in the form of a simple daily exercise programme, which can be carried out in school for 10 minutes every day.

This programme, devised at The Institute for Neuro-Physiological Psychology (INPP) in Chester, is based on a clinical programme that has been in use since the 1970's. The test battery and clinical programme was adapted by Sally Goddard Blythe in 1996 for use with larger groups of children in a school setting.

The test battery is intended to be used by teachers and trained professionals as a screening tool only. It will not provide sufficient detailed information to justify a diagnosis, nor is it intended to replace standard neurological examinations, psychological or educational assessments usually carried out by trained psychologists, remedial specialists, medical and other non-medical professionals. It will however, identify children who are likely to benefit from the INPP Schools' Programme.

The programme involves carrying out a series of developmental movements each day, based on movements normally made by the developing child in the first year of life. One of the major differences between the INPP Programme and many other programmes currently available for improving coordination and balance, is that the INPP exercises take children back to the very *beginning* of balance training.

All exercises are carried out on the floor and help to develop proper head alignment with the body (the basis for good posture), ability to use left and right sides and upper and lower sections of the body in different ways (the basis for coordination). Only when every child can carry out these very simple movements with automaticity does the group move on to repeat the movements in more challenging positions.

¹ Goddard Blythe SA, 2005

By using natural movements in a developmental sequence, improved coordination becomes an integrated function rather than simply a practice learned skill. (Skills that are dependent on continuous practice tend to lack flexibility and do not necessarily adapt well or transfer to new situations).

The INPP Programme for Schools has been the subject of series of studies carried out to assess the reliability of both The INPP Test Battery in identifying children who are under achieving or are at risk of underachieving, and of the effectiveness of The Developmental Exercise Programme in improving reflex status, balance, coordination and educational performance. The first results involving over 810 children in primary schools across the United Kingdom were published in 2005².

A series of studies have been carried out to assess the reliability of both INPP Test Battery and Developmental Exercise Programme in:

- Identifying children who are at risk of under-achieving in school
- Improving immature reflexes, balance, coordination and eye movements through the daily exercise programme
- Enhancing the educational performance of children who are under-achieving academically as a direct result of immature motor skills.

Research Findings

The first pilot studies funded by the DfES Best Practice Research Scholarships were carried out at Mellor Primary School in Leicester and Prince Albert School Birmingham in 2000 and 2001. They found significant improvement in the measures of reflexes, balance and coordination in children who had taken part in the programme compared to the control group. At Mellor Primary School, children in the exercise group made a gain of 23 months in reading compared to the 12 months in the control group over a 9 months period of time, and at Knowle C of E Primary School in Solihull, the reading and comprehension age of the exercise group improved by 14 months compared to 8 months over a 7 month period.

These trends have been replicated by a study completed in December 2004 involving 90 children at Swanwick Primary School in Derbyshire carried out by Jackie Micklethwaite. All of the children were assessed using the INPP Test Battery and were then divided into 3 groups: 30 children carried out the INPP exercises every day at school for one academic year; another 30 children participated in a general exercise routine everyday whilst the third group of 30 children did not receive additional movement education throughout the school year. The final report stated that, "there is a remarkable correlation between undertaking the INPP programme of reflex development and inhibition and the development of coordination, balance, visual-motor and auditory skills for almost all children, regardless of current academic attainment, although the biggest gains were made by the least able academically too. Informal exercise on a daily basis also improves the skills above two times as much for the control group, who performed no additional exercises, but only half as much as the developmental exercises. Some individual children who had a history of apparently intractable learning difficulties made remarkable progress in reading. These were in the INPP group".

A larger study was completed in 2003 by the North Eastern Education Library Board (NEELB) in Northern Ireland involving 672 children from 7 schools. The study investigated whether there was a relationship between signs of developmental immaturity and educational under-achievement in P2 children (4-5 year olds) and the efficacy of the INPP Programme in improving balance, coordination and literacy attainment in P5 children (8-9 year olds). The following conclusions were drawn:

- 35% of P5 children and 48% of P2 children showed elevated levels of retained reflexes at the first assessment.

² Goddard Blythe SA, 2005. *Releasing Educational Potential through Movement*. Child Care in Practice. 11/4:415-432

- 15% (49) of P5 children had a reading age below their chronological age. Of these, 28 also had elevated levels of retained reflexes.
- Elevated levels of retained reflexes are correlated with poor educational achievement at baseline.
- Children who undertook the exercise programme showed a statistically significant greater decrease in retained reflexes than children who did not undertake the exercises.
- Children who undertook the exercise programme showed a highly significant improvement in balance and coordination, and a small but statistically significant increase in a measure of cognitive development over children who did not undertake the exercises. No difference was found in reading, handwriting or spelling in children who were already achieving at or near their chronological age, but for children with high levels of retained reflexes and a reading age below their chronological age, those who undertook the exercise programme made greater progress.
- Retained reflexes are correlated with poor cognitive development, poor balance and teacher assessment of poor concentration/coordination in P2 children. Neurological scores and teacher assessment at baseline predicted poorer reading and literacy scores at the end of the study.

These findings suggest that there are children in mainstream schools who are currently underachieving as a result of immature motor skills. These children are at risk of being “lost in the system”. Some are assumed to be performing well enough, whilst others are performing marginally below expectations and do not therefore qualify for additional support. Many of these children could do better if the physical nature of their difficulties was identified and remedied. Furthermore, all studies carried out so far have shown a trend whereby children who were under-performing most at the beginning of the programme were the ones who made the greatest gains on both the developmental tests and educational measures after the programme. These are the same children who usually struggle to maintain gains made as a result of standard remedial intervention.

Teachers also report improvements in concentration and behaviour as a result of the programme. Children who were formerly easily frustrated and either gave up with tasks they found difficult, became disruptive or who had little regard for the feelings of others, showed increased perseverance and consideration.

Swanwick School reported that, “the children enjoyed the discipline of performing an exercise routine at the beginning of the morning. It appeared to both calm and energise them and they were disappointed if their routine was unavoidably disrupted. There is no doubt, that despite continual traffic through the work area (school hall), the session created a tangible atmosphere not often experienced in a busy school setting and which was commented on by several visitors to the school.

REFERENCES

Pettman H., 2001, *The effects of developmental movements on children's persistent primary reflexes and reading difficulties: A controlled trial*. Mellor Primary School, Leicester.
Final report prepared for the DfES Best Practice Research Scholarship.

Bertram S., 2002, *Learning enhancement through reflex inhibition. Phase 1*. Report prepared for The Birmingham Core Skills Partnership.

Preedy P., O'Donovan C., Scott J., Wolinski R., 2003, *Exercises for learning*. A beacon project between Knowle C of E Primary School and Kingsley Prep School.

Micklethwaite J., 2004, *Swanwick Primary School, Derbyshire*. Report prepared for Best Practice Research Scholarship. Department of Education and Employment.

Swanwick Primary School, Derbyshire. Final report prepared for The DfES Best Practice Research Scholarship.

Wilson JA., Fylan F., 2004, Northern Ireland Education Library Board Study.

Goddard Blythe SA., 2005: *Releasing educational potential through movement: A summary of individual studies carried out using The INPP Test Battery and Developmental Exercises Programme for use in Schools with Children with Special Needs*. *Child Care Practice*. Volume 11/4. 415-432.

The INPP School Programme

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FEES

Option A: Introductory Presentation / Staff Meeting

If you would like further information about the course, we can do an introductory presentation during a staff meeting or if required, a presentation to a select group such as Management, Board of Trustees, and Remedial/Extension personnel or support staff.

Costs: This option may incur travel costs.

Option B: Individual

Smart Learning Solutions runs a one day course at regular intervals throughout the year. This course is held at Eastgate Christian Centre, 5 Ben Lomond Crescent, Pakuranga.

Costs: \$200 + GST per person. This includes a course manual and all handouts. Morning, afternoon tea and a light lunch are provided.

Option C: Whole Staff "In Service" Training

If you would like to implement the programme throughout the school and require whole staff training, this can be arranged. Smart Learning Solutions will come to your school and run the one day course on a Saturday or on a mutually agreed day. Numbers are limited to 40 staff members.

Costs: \$1500 + GST for the one day course.

Course manuals and handouts are required by each teacher attending, at an additional cost of \$25 per person.

Travel and accommodation costs, if applicable, are additional.

The INPP School Programme

COURSE DESCRIPTION

This course has been devised primarily for class teachers. The course comprises:

Morning Session:

- . Introduction
- . Signs and Symptoms of movement disorders
- . The role of movement in sensory perceptions and coordination
- . A summary of research into the role of abnormal reflexes in specific learning difficulties
- . Signs of sensory-motor problems in the classroom
- . Instruction in the use of **The INPP Test Battery for Schools**

Afternoon Session:

- . Test battery continued
- . Demonstration and audience participation in **The INPP Developmental Exercise Programme for use in Schools**

Requirements for implementation of the INPP Programme in Schools:

- . Teacher to have attended the one day course
- . Assessment for data collection. This could be whole class or for individual children to monitor progress
- . Supervision by teacher of exercises for 10 minutes a day, 5 days a week for a minimum of 1 academic year.

The INPP School Programme

ADDITIONAL READING

Ayres, AJ, 1983. *Sensory integration and learning disorders*. Western Psychological Services, Los Angeles, Ca.

Bender L, 1938. *A visual-motor gestalt test and its clinical use*. American Orthopsychiatric Association Res. Monograph 3. New York.

De Quirós JL, Schrager OL, 1979, *Neuropsychological fundamentals in learning disabilities*. Academic Therapy Publications. Novato. CA.

Dobie S, 1996. Seminar on the use of motor training programmes. Chester.

Goddard Blythe SA, 2005. *Releasing educational potential through movement*. *Child Care in Practice*. 11/4:415-432

Goddard SA, 2002. *Reflexes, learning and behaviour*. Fern Ridge Press. Eugene. OR.

Goddard Blythe SA, 2004. *The well balanced child*. Hawthorn Press. Stroud

Goddard Blythe SA, 2008. *What babies and children really need*. Hawthorn Press. Stroud.

Gold S, 1997. *If kids just came with instruction sheets*. Fern Ridge Press, Eugene, OR

Kephart, NC, 1960. *The slow learner in the classroom*. Merrill, Columbus, Ohio

Kohen-Raz R, 1996. *Learning disabilities and postural control*. Freund Publishing House Ltd. London.

Palmer LL, 1995. *Readiness stimulation in pre-school and primary children*. College of Education, Winona State University, Winona.

Schrager OL, 2000. *Balance control, age and language development*. Paper presented at The 12th European Conference on Neuro-developmental Delay in Children with Specific Learning Difficulties. March, 2000. Chester. UK.

Tansley AE, 1967. *Reading and remedial reading*. Routledge and Kegan Paul Ltd. London

Valett RE, 1980. *Dyslexia*. Costello Educational. Tunbridge Wells