

Linking Occupational Therapy with Education

In the year 2004, children and their participation in education and in play are being increasingly recognised. The Department of Education and Science's launch of *Your Education System* is seen as a move towards shaping a new and more dynamic education system based on the needs expressed by people in the community and by children themselves. The publication of *Ready, Steady, Play!*, Ireland's first national play policy, recognises the importance of promoting play in the community and in education. In addition, the *Education for Persons with Disabilities Bill 2003* seeks to provide a more comprehensive approach to educating children with difficulties. It emphasises a move towards a team approach and puts in place a number of official routes that can be taken should a child experience difficulties in school. This article describes what an Occupational Therapist can offer children, teachers and support staff within a school.

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PAEDIATRIC OCCUPATIONAL THERAPY

Paediatric occupational therapy is the use of *purposeful activity*, based on a broad range of knowledge and skills, to enable a child with an educational/developmental difficulty to reach his/her optimum level of function in daily life activities, including school activities. "Occupational Therapy practice is based on an understanding of the interactions among children, their activities and their environments" (Case-Smith, 2001, p. 2). Trained to recognise and work with children with different disabilities, the aim of the occupational therapist (OT) is to assess and treat the underlying difficulties which limit the child's ability to perform a task.

The value of the OT working in schools has been well documented internationally and information can be accessed through a number of websites, e.g. www.aota.org. "The goal of the OT in the school environment is to improve a student's performance of tasks and activities important for school functioning" (Shagian Whealan, 2003, p. 1). Currently, the Department of Education and Science (DES) in Ireland does not employ paediatric occupational therapists directly. However, occupational therapists are listed as a professional group whose reports are frequently requested by the DES.

The educational systems of the United States, Australia and New Zealand have each embraced the professional skills of OTs and found them to be very beneficial. In America it is recognised that "Occupational Therapists in schools have the potential to positively influence and enhance the lives of children" (Case-Smith, 2001, p. 758). Many schools in these countries employ fulltime paediatric OTs to work alongside teachers promoting independent learning and play skills in children with special needs through the use of purposeful activity. A number of studies have highlighted the benefits of school-based occupational therapy in areas such as handwriting, developing

new and more effective teaching strategies and school productivity (Palisano, 1989; Niehues, Bundy, Mattingly and Lawlor, 1991; Dunn, 1992).

A study completed by Fairbairn and Davidson (1993) examined what 103 teachers in Ontario felt they received, needed and expected from OTs. Results indicated that all the teachers valued the work of the OTs, finding them knowledgeable and supportive, and providers of practical programming, physical exercise and adapted equipment. Eighty-nine percent reported that the occupational therapy programme enhanced the child's ability to learn. Occupational therapy intervention was also noted to help in providing medical, physical and developmentally appropriate information in educational terms, and in eliminating problems that interfere with a child's ability to profit from instruction.

CHILDREN WHO NEED AN OCCUPATIONAL THERAPIST

Client Group

Occupational therapy is concerned with enabling children to reach their potential in all areas of life. A broad range of knowledge and a practical approach to intervention allows the OT to support the education of children who have a number of difficulties. Occupational therapists work with children with physical and general learning disabilities such as cerebral palsy, spina bifida, Down's syndrome, autism, etc. They also work with children with less visible forms of disability who struggle in our education system due to an underlying difficulty, e.g. developmental co-ordination disorder, sensory integrative disorders, anxiety.

Teachers often pick up on these less visible forms of disabilities in the early years of school. The OT can offer intervention and support to children, who often present with difficulty in some or all of the following skills:

Gross Motor Skills

(Often noticed in P.E.)

- Co-ordination of movements
- Sequencing of movements
- Balancing
- Eye-hand co-ordination

Fine Motor Skills

- Using scissors
- Buttoning a coat
- Using a knife and fork
- Handwriting/colouring
- Using two hands together to manipulate small objects

Perceptual Skills

(The child's ability to process, analyse and interpret the information that he/she gets through touch, movement sense, body position sense, visual and hearing sensory systems)

- Copying from a blackboard
- Writing on lines in a copy book

- Colouring in shapes
- Not seeming to understand instructions even when hearing is normal
- Bumping into objects

Sensory Skills

- Paying attention in class
- Sitting still
- Staying alert

Activities of Daily Living

- Organising self in one's environment
- Basic self-care abilities, e.g. dressing, eating, toileting, personal hygiene, cooking
- Finding books in school bag
- Putting on clothes, shoes after PE
- Organising self at break-time
- Community living skills, e.g. using public transport, shopping, accessing leisure activities

Social Skills

- Making/keeping friends
- Participating in group games
- Following through on instruction
- Behavioural/emotional issues

(Adapted from Chu, 1995)

The OT also addresses the child's sensory processing skills, postural control, oral motor skills, interaction with the environment (this includes wheelchair access, environmental controls, switch access for computers, etc.) and interaction with others. Where these difficulties are not addressed, they inhibit the child's education and ability to progress successfully.

REFERRAL PROCESS

Assessment and Planning

When a child is referred to occupational therapy, a full assessment of his/her skills is carried out. Involvement of parents and teachers is crucial in this process. During a comprehensive occupational therapy assessment, a child's skills, abilities and needs are established through

- Observation of the child engaging in purposeful activities, e.g. playing
- Standardised assessments, e.g. *Movement Assessment Battery for Children*; *Beery-Buktenica Developmental Test of Visual-Motor Integration*
- Non-standardised assessments, e.g. questionnaires
- Assessing the school environment based on the child's needs

Occupational therapists can also offer assessment in the areas of handwriting, computer skills, exam recommendations, engagement in PE, appropriate seating and positioning, feeding, organisation, coping skills and interaction with peers.

Activity analysis is a key element of occupational therapy evaluation and intervention. It involves skilled observation of the child while he/she completes a task. By breaking down the task into different stages and skills, the therapist assesses how the child's disability affects his/her level of function in the classroom. Factors that may be preventing the completion of the activity to the child's satisfaction are identified (environmental, perceptual, motor, social, sensory, emotional). Through further analysis, appropriate activities of play are selected to enable the child to reach his/her full potential.

On completing an assessment, the OT provides an appropriate intervention plan. This may include direct intervention, consultation, training regarding appropriate strategies and/or individualized programmes. The OT may work with individual children or with groups. Short-term and long-term goals may be set and these are reviewed at regular intervals.

THE WORK OF THE OCCUPATIONAL THERAPIST

Problem solving Approach

Using a problem solving approach in collaboration with the child's educational team, the OT may

- suggest and facilitate alternative ways to complete a task;
- devise a functional programme;
- modify the environment;
- promote an understanding of the child's specific difficulties;
- provide specialised equipment to enable the child to become more independent, maximising his/her potential in the classroom situation.

"A problem solving approach to evaluation shifts the focus from entitlement for services to support for student learning. When a concern is identified about a student's functioning, a problem solving approach is used to implement interventions and monitor their effectiveness" (Clarke and Miller, 1996, p. 706). By grading the activities over time to more challenging levels, the child's skills are improved while fostering self-esteem. Using a variety of techniques, the OT then works with the child to achieve the desired skill level or role.

Models of Service

When working with a child with educational difficulties, OTs generally use one of three models of intervention: direct treatment, consultation or monitoring. Direct treatment or "pull out" intervention involves the therapist taking the child for an allocated amount of time each week or as negotiated. Consultation involves discussion and problem solving with school staff and parents, and continued and dynamic collaborative work. "Consultation seeks to enable parents, teachers or older students to assume their own roles more effectively" (Bundy, 2002, p. 310). "Consultation expands the impact of direct service so that students receive the added benefit of the Physical and Occupational Therapists' recommendations throughout the school day" (Hanft and Place, 1996, p. 12). Monitoring involves establishing an OT programme to be carried out by school staff and modifying it at a pre-set date.

When working in a school, the primary interactions occur between the child, teacher, support staff, parents and therapist. There is also communication with other relevant disciplines. A holistic view of the child's difficulties is taken, incorporating environmental inputs. As can be seen in Figure 1.1, it is very much a team approach focusing on the needs of the child.

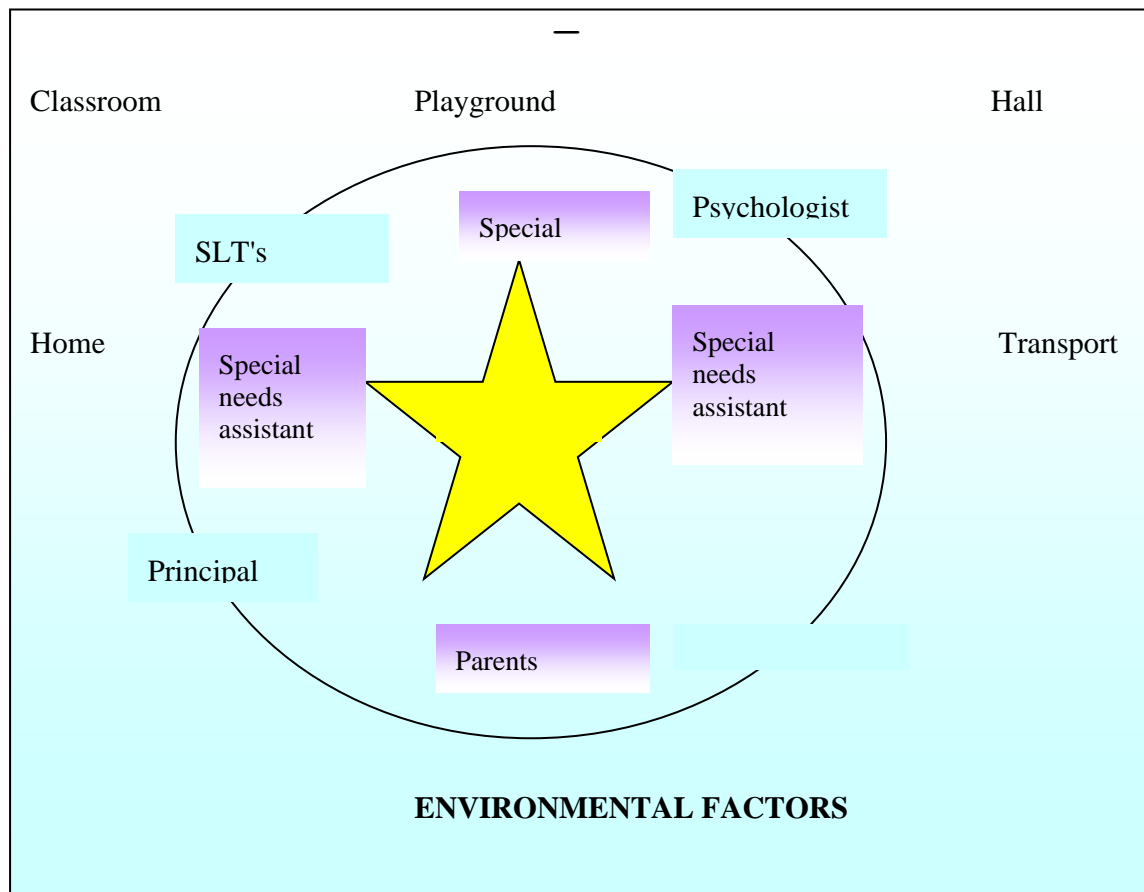


Figure 1.1 Main interactions in a child-centred problem solving approach

Types of Intervention

According to Trombley (1998), there are two general occupational therapy approaches to working with a child: a “bottom-up” approach or a “top-down” approach. Generally the OT will use a combination of both approaches in order to maximise the effectiveness of the intervention in the shortest period of time. This can be done through the application of appropriate strategies or environmental modifications in addition to working on the underlying cause of the difficulty.

Bottom-up Approach

Occupational therapists using a bottom-up approach “focus intervention on the client’s generic task abilities, specifically on impairments” (Neistadt and Crepaeu, 1998, p. 304). Interventions are generally remedial and tend to focus on specific difficulties. Once these difficulties have improved, it is assumed that the child’s completion of general tasks improves, especially for well-learned and everyday skills, e.g. handwriting, attention. Examples of bottom-up approaches used by OTs working with children include visual perceptual training (specific remedial tasks to encourage the

development of basic visual perceptual skills, e.g. figure-ground, discrimination, etc), Bobath techniques (a neuro-developmental intervention to improve postural control by facilitating normal movement and inhibiting abnormal movement patterns) and sensory integration (intervention based on facilitating appropriate neural processing of sensory information). These approaches involve individual sessions with the child with advice and programmes for parents and teachers to follow. An example of a bottom-up approach would be where a child with low tone has difficulty staying alert and concentrating in class. The OT might work on increasing tone and improving sensory processing in order to improve the child's level of alertness.

Top-down Approach

A top-down approach involves identifying difficulties at the level of role performance, e.g. academic worker, playground participant, friend, brother. By identifying and analysing the activities necessary for the child's life roles, the OT enables the child to maintain performance of these roles in specific environments. Intervention strategies often include adaptations to the environment, changing a routine or adapting a task. Using this method a child with low tone who has difficulty staying alert might be provided with a wedge shaped "sit'n'move" cushion to facilitate movement and improve posture. Other sensory strategies might also be incorporated. e.g. altering the environment, encouraging appropriate movement breaks, etc.

Play

The importance of play in a child's life cannot be underestimated and there is a growing awareness of this in society. This can clearly be seen by the publication of *Ready, Steady, Play! A National Play Policy* (2004) which advocates a move towards encouraging play in children's lives and recognizing the importance of play. Play, the dominant occupation of childhood is one of the primary occupational therapy tools of intervention with children. Through playing, and engagement in play activities, children develop their skills. "Play is a non-threatening way to cope with new learning and still retain self-esteem and self image" (Moyles, 1994, p. 7). Intrinsically motivating for children, it can be easily graded to a more challenging level to facilitate development of further skills (Case-Smith, 2001).

Paediatric occupational therapists are skilled in the process of analysing a task and grading it appropriately in order to provide the child with just the right level of challenge. Play is an invaluable tool to use when working with children and can provide an interesting and challenging way to teach them a new concept or idea. "For young children, play is a tool for learning and practitioners who acknowledge and appreciate this can, through provision, interaction and intervention in children's play ensure progression, differentiation and relevance in the curriculum" (Moyles, 1994, p. 6). While all paediatric occupational therapists will use play and activity analysis in their interventions, other interventions may also be used. This may be dependent on the post-graduate training of the OT and on the profile of the children they work with.

TRAINING FOR OCCUPATIONAL THERAPY

Occupational therapy is currently a university-based course which can be completed in four years at under-graduate level (Trinity College Dublin, National University of Ireland, Cork and National University of Ireland, Galway) or in two years at post-graduate level (University of Limerick). A range of subjects is studied during the course

– anatomy, physiology, psychology, life-span development, psychiatry, developmental neuro-anatomy, medicine and orthopaedic studies, experiential learning through life management modules, art and drama. Students also focus on the theories, principles and practice of occupational therapy and the person-environment-occupation interaction.

To meet the standards of the World Federation of Occupational Therapists (W.F.O.T.), one thousand hours of fieldwork experience is also required. This is supervised and takes place in a variety of settings such as acute hospitals, rehabilitation centres, special schools, community centres, mental health clinics, etc. Further post-graduate training in specialised areas may also be completed, e.g. sensory integration training, neuro-developmental techniques, etc.

FINDING HELP

At present there is a shortage of OTs in Ireland. However, extra university-based training courses have become available to deal with this issue. Services vary from area to area but at present, the options for referral are:

- referral to community paediatric occupational therapy services through a local health centre/G.P.;
- contacting the Association of Occupational Therapists in Ireland for a list of Occupational Therapists in private practice.

Association of Occupational Therapy in Ireland
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The authors would like to acknowledge the assistance of Sandra Patton, Senior Occupational Therapist, Chairperson, PSIG, and Helen Lynch, Senior Occupational Therapist, MAOTI.