Increasing language awareness and linguistic knowledge of the physical education teacher is mutually beneficial for the profession and learners with intellectual difficulties

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As humans we have a **languaged** understanding of the world where social engagement is largely mediated via language. Depending on perspective, language has, over time, been considered a social tool (sociolinguists), a learned behaviour (behaviourists), a system of mental rules and symbols (psycholinguistics). We now know it as a structured, arbitrary system of symbols, a shared code which is culturally determined.

Language and learning are intimately linked and socially grounded. Vygotsky put language and communication at the heart of personal and intellectual development (NCCA, 2007). Given this importance, it would seem prudent that all who work with learners, especially those who have language and learning difficulties, should have a working knowledge and understanding of the language process and a positive attitude to it. This might involve an overview of language acquisition and development, an appreciation of the difference between speech and language and difficulties as associated with each, a realistic appreciation of the power of language and its limitations, as well as strategies for when language fails or is deficient.

The purpose of this research is to identify the benefits of language awareness and linguistic knowledge for physical education teachers/coaches, working with children and adults with language and learning difficulties. The approach is based on the premise that learning is to a large extent language dependent.

The paper reviews selected literature in the relevant disciplines of linguistics, therapeutics and pedagogy with the aim of identifying research on the interaction or relationship between language (language acquisition/development/learning) and physical activity (sensory/motor). The work will draw on a theoretical framework from occupational therapy and language therapy using a multi-sensory and sensory integration rationale (Ayres, 2005). The author intends to exploit, via reflective practice and using an action research typology, the latent or tacit knowledge base that all teachers have through their first-hand experience of working with children with language and learning difficulties. (McNiff & Whitehead, 2002)

It will identify the benefits of a cumulative approach to learning (both cognitive and motor) for example signing supports communication which in turn supports language thereby facilitating learning. The approach is typical of the action research spiral as applied to education (Koshy, 2010).

The concept of language reciprocity and synchronicity (changes in one language function support changes in other functions) has implications for the practitioner as does the notion of metacognition. Rehearsal talk may be used by the learner to try out new ideas and thinking as a way of learning and remembering or doing a task (Shea, 2011) By facilitating this oral production, the PE teacher/coach is enabling the learner (especially important in the case of
learners with intellectual disability/learning difficulty) to parallel the motor activity with a linguistic activity to the benefit of both.

Drawing on the above research, the paper will propose how language awareness can be integrated both in the education of the practitioner and in practice. It will attempt to show how the addition of this domain will enhance the experience of the learner in both acquisition and internalisation of physical activity outcomes. (Connor-Kuntz and Dummer, 1996). It argues that this is possible in an open, abilities based, non-deterministic approach even when an inter professional experience was not encountered by the teachers in initial undergraduate education and training. A trans-disciplinary, as opposed to a multi-disciplinary or inter-disciplinary strategy, is favoured where each professional is respectful of the values of the other. In such an environment, the PE teacher/coach can, in a sense, and without being a subject expert, support the role of the language teacher and/or speech and language therapist.

The thesis is that progress in one domain (physical/motor activity) can be mirrored by progress in another domain (linguistic) and vice versa, where the practitioner is aware of the relationships and actively incorporates a deliberate strategy. The strengthening of active/working memory, a desired outcome in achieving learning goals in both the physical and linguistic domain, is a distinctive element of this multi-sensory approach.

Recent research in brain science has revealed interesting links between cognitive activity and physical activity, highlighting the effectiveness of exercise at managing and increasing neurotransmitters. Exercise primes the brain for learning and regulates functions for optimal connections. The suggestion is that the brain acts like muscles whereby use increases growth and by inactivity loss of function may ensue (Ratey, 2008).

In support of the arguments linking physical activity and brain growth, several studies have identified positive outcomes by associating physical activity with other learning tasks (Castelli et al, 2007). The importance of rhythm, as a foundation for language learning, has long been acknowledged and by linking this with physical activities supporting rhythm, learning to read may be consolidated. Balance activities have also reported positive effects such as improved writing skills and enhanced reading and visual processing.

This is an abilities based approach situated in a social inclusion paradigm. An emergentist theory of intervention is proposed. The difficulties/challenges experienced by the learner may be compensated by an experienced practitioner with the required multi competences (Hutzler, 2011). Intervention in both language and physical activity/sports increases exposure thereby increasing the odds of learning according to this theory (Poll, 2011).

The paper will identify how incorporating elements of linguistic theory and language awareness may enhance the repertoire of the practitioner with resulting benefits for both physical activity and language learning/consolidation for the learner. It will draw on research from Sport Discuss, Science Direct, EUJAPA (Kudlacek et al, 2010) European Journal of Special Needs Education, and linguistics as well as incorporating the author’s experience of working with children and adults with learning and language difficulties.
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