‘Patrick’

Watch, Practice, Perform, Reward: meeting (special) learning needs

Key words: autism, motor symptoms, feedback and reinforcement, pedagogy

SECTION 1: DESCRIPTION OF THE YOUNG PERSON

Patrick is a seven-year old Irish boy who has autism and the associated behaviours of delayed social and communication skills. Patrick has three older siblings, a sister who is nine-years old and two brothers who are eleven and thirteen years old respectively. He has a more engaging relationship with his sister than his brothers and his mother believes this is due to his sister being more patient with Patrick favouring the repetition of tasks over and over again. Patrick’s father works as an estate agent selling houses in the main town; his mother does not work. Patrick’s mother takes him to school every morning and collects him at the end of each day.

Patrick attends the i-PLAY (Inclusive Play and Leisure Activities for Youth) programme at the local University once a week over a ten-week period. This programme is designed for children, youth, and young adults with special needs to have an opportunity to play and interact socially with peers. Participants are engaged in a range of physical activities (e.g., dance and games) and each is paired with 3rd year pre-service physical education teachers to ensure the young person can receive individual attention, support, and encouragement. The focus of i-Play is promoting physical activity for young people and incorporating it into their daily lives (i.e., at school, after school, and at home). The
programme provides pre-service physical education teachers with the opportunity to
gain experience in planning and assisting youth with special needs as it relates to the
physical activity setting. Families also benefit from the programme as it offers
opportunities to connect with and support each other and their children with special
needs.

Patrick attends the i-PLAY programme every week for one hour. The programme is for
young children between the ages of six and ten and it takes place in the multi-purpose
sports hall. There are few visible signs that Patrick enjoys being involved in the physical
activity opportunities offered. The pre-service teachers facilitate numerous individual
physical activity opportunities using different pieces of equipment, but Patrick prefers to
rigidly (with no deviation), and repetitively, pace back and forth along two benches that
are set out for the participants to sit on during breaks from the activity sections. Patrick
is physically capable of undertaking a range of physical activities if he chooses, yet the
excitement, colour and noise of the activities happening around him all appear to escape
Patrick’s attention. Patrick rarely responds to those who call his name.

It is difficult to comment on Patrick’s feelings about peer relations. As the programme
allows two pre-service teachers to work with each young person, Patrick favours staying
with them rather than being integrated into activities that involve working in close
proximity with his peers. There is no evidence of a generic problem with physical contact
because he happily holds on to the pre-service teachers as he walks along the benches.
Instead, it appears that Patrick prefers to work on his own most of the time, suggesting
that he is perhaps oblivious, or just uninterested in what is going on around him.
Given that Patrick has difficulties with language and social communication, including avoiding eye contact, it can be challenging to gauge whether Patrick enjoys participating in the programme. Patrick is, nonetheless, strong-willed and the determined look on his face reminds us of this. His facial expressions also allow us to determine when he becomes frustrated. Patrick certainly does display a characteristic need for sameness and structure, not only in the activities he undertakes but also in his behaviour. There are instances where Patrick demonstrates a resistance to changing his behaviour; e.g., when the pre-service teachers attempt to stop him from striking them with his hand. His resistance can lead to bouts of out-of-control behaviour before he calms down.

SECTION 2: A BIO-PSYCHOMOTOR PERSPECTIVE ON PATRICK AS A LEARNER

Patrick has shown four key characteristics stereotypical of people with autism. Firstly, reduced social interaction, secondly repetitive nature, thirdly akinesia muscle rigidity (slowness in the initiation of movement) and fourthly bradykinesia (slowness in the execution of movement). The challenge with autistic individuals is to encourage them to engage in physical activity. Coupled with poor motor functioning is low motivation (Koegel, Koegel & McNerney, 2001) and successful interventions must target the psychomotor aspect to the problem. Common to many people with autism, Patrick displays difficulty in planning and self-monitoring (Hughes, Russell & Robbins, 1994; Ozonoff, Strayer, McMahon & Filloux, 1994). There is no doubt, however, that encouraging Patrick to physically challenge himself and to seek to improve his motor abilities is very desirable. If Patrick can engage in the process then we expect Patrick to not only improve his physical skills, but also his personal well-being, confidence, motivation to continue and ultimately his social interaction with peers. The key objective
is to encourage Patrick to engage in activities with others and to increase confidence and competence. The two sub-sections which follow describe the biomechanical and psychological tools that can be used to help Patrick engage using auditory, visual and motivation techniques.

1. Classroom Tasks- Gait and Balance Games

Persons with autism also demonstrate a variety of motor symptoms including: alterations in motor milestone development (Provost et al., 2007), hypotonia (i.e., decreased muscle tone), muscle rigidity, akinesia difficulty with voluntary muscle control, bradykinesia slow movement (Damasio & Maurer, 1978; Kohen-Raz et al., 1992), and postural control impairments (Kohen-Raz et al., 1992; Minshew et al., 2004). These motor symptoms can compromise a child's ability to perform common activities of daily living, such as walking, and this is very apparent in Patrick's case. An abnormal walking pattern can lead to pain, fatigue, and joint stress which, in turn, may affect a child's functional capabilities resulting in resistance to activity and reduced quality of life. To ensure optimal functionality and independence, and improved quality of life, researchers, clinicians and teachers need to examine and engage both biomechanical and psychological function of children with autism. It is recognised that primary-aged students with autism demonstrate a restricted range of social communication skills. This is manifest in limited speech making it difficult to initiate comments, request information from others, listen and respond to others, and interact in simple games (VanMeter et al., 1997). A promising practice in this regard is the use of video technology, which has been used to teach a wide variety of skills to individuals across a range of disabilities and ages. Recently, there has also been interest in the use of treatments such as video
and auditory feedback with children with autism (Maione & Mirenda, 2006). All the tasks in which Patrick is involved at the i-PLAY programme follow the WPPR principle: Watch Practice Perform Reward and this is illustrated in the examples below.

**TASK 1 GAIT- 20 metre gait activity along a balance beam with visual and auditory feedback**

Utilising a task with which Patrick feels familiar is key to his engagement. Mimicking his preferred balance tasks (as described in the opening section) a progressively difficult and more interactive task can be effective. For example:

1. A five inch wide twenty metre strip of white tape is placed along the ground forming a straight walkway. Patrick is tasked with walking at his own pace along the tape without losing balance.

2. Using a metronome with a variable beat Patrick is tasked with listening to the rhythm of the beat and walking in time along the twenty metre tape without losing balance.

3. The twenty metre tape is transferred to a gym bench (ten cm high) and Patrick is tasked with listening to the rhythm of the beat and walking in time along the twenty metre tape without losing balance: slow for five minutes, medium pace for five minutes and brisk walking pace for five minutes.

**Watch** = Patrick watches a video projected onto the hall wall of the teacher performing each of the three tasks.
Practice = Patrick practices the task repetitively with support and guidance from the teacher. Patrick is video recorded at each attempt and ten seconds after every walk the software (SiliconCoach Timewarp, 2013) relays Patrick’s last practice onto the hall wall for Patrick and everyone to see and Patrick to comment on.

Perform = Patrick performs the task to his highest ability competitively alongside the teacher and then other children who perform the task.

Reward = The development of intrinsic motivation is encouraged via a self-monitoring/motivation chart, teacher and attendee support, and a celebration for every successful goal reached.

**TASK 2 BALANCE- ‘Y’ balance exercise with visual feedback**

Continuing the theme of building on Patrick’s favourite balance activities, the ‘Y’ Balance Test (see Figure 1) can be used. The reliability of this three-direction Star Excursion Balance Test, or Y Balance Test, has been proven in performing dynamic balance testing, with good intra-rater reliability (ICC: 0.85 to 0.91) and good inter-rater reliability (ICC: 0.99 to 1.00) (Plisky et al. 2009). For the test, Patrick balances on one leg and then reaches as far as possible along each of the three white lines, without losing balance. The WPPR test is repeated while balancing on the other leg.
During the i-PLAY programme, Patrick is given thirty minutes each week for nine weeks to practise and improve his ability on each task. On the tenth week a competition is introduced. Each week the pre-service teacher supporting Patrick assesses his movement ability using Gallahue and Ozmun’s (1995) movement development levels checklist. For gait and balance, checklist modules identify three or four key movement characteristics that rate the movement as at an initial, elementary or mature stage of development.

2. The role of Feedback and Reinforcement for Patrick

Supporting adults - in this case pre-service teachers - play an integral role with Patrick during his assessment and intervention. The timing and manner of feedback are key elements in building confidence and competence with all children, and this is magnified
in the case of autistic children (Ingersoll, Schreibman & Tran, 2003). The pre-service teacher at i-PLAY should encourage Patrick to participate in the gait and balance tasks in a gradual and supportive way. Utilising Gallahue and Osman's (1995) developmental level checklist will ensure an appropriate level of difficulty is attempted for the activities. It is also important to ensure there is minimal fear/anxiety linked to the activity and that ultimately there will be an increase in the likelihood of success in these activities. Additionally, Patrick’s age (seven) is usually a time of developing motivational and cognitive readiness (Fry & Duda, 1997; Veroff, 1969) and supporting adults must look for signs of this readiness during assessments (e.g., signs that Patrick’s focus of attention and timing of language are becoming more coordinated). Regarding the feedback for Patrick over the ten weeks, the same WPPR principle can be adopted throughout all activities and in the sections below we offer a little more detail on these processes.

**Watch** = As was noted earlier, in addition to Patrick watching the teacher performing the balance test, Patrick will watch himself as he attempts the balance test. This observation is a form of motor imagery training and has been used successfully as an intervention to ameliorate a range of motor clumsiness issues in children (Wilson, Thomas & Maruff, 2002). We know from a growing body of literature that when we observe someone performing a motor action, our brains seem to stimulate performance of the action we observe (see Moran, Campbell, Holmes & Maclntyre, 2012 for a review). Identical areas of the brain activate and function in much the same way as when an action is performed or merely observed and thus these brain areas (premotor cortex and right superior parietal lobe) have become known as the ‘mirror system’. Furthermore, this action
observation and simulation has been argued to underpin sophisticated mental functions such as communication (Rizzolatti & Arbib, 1998), observational learning (Berger et al., 1979) and socialisation (Gallese and Goldman, 1998). Interestingly, biomechanically impossible actions have been shown not to activate the mirror system (Stevens et al., 2000). Thus, the relatively simple practice of observing an action, particularly ones’ own action, is a core part of the intervention with Patrick. Given his autistic traits, Patrick may benefit more from observing himself performing than from observing the teacher but in the intervention described earlier, the decision was taken to show Patrick both types.

**Practice**= Over the course of the ten weeks Patrick will observe the teacher and himself performing the tasks on a weekly basis. Patrick will be able to monitor his performance gains and see how he has improved each week. Coupled with this will be the pre-service teacher’s comments and encouragement. Taken together this monitoring by self and others should enable significant success and gains to be made. Another aspect to the feedback Patrick will receive will be the auditory feedback. This, coupled with the visual feedback from the video display, will help Patrick to coordinate and synchronise his motor coordination and timing. By utilising a metronome beat at different speeds depending on the task and the difficulty encountered, it is hoped to maximise the auditory rhythmic entrainment potential of the metronome. For example, we hope to get Patrick to step on the balance test to a slow rhythm initially and this may enable him to more effectively hold his balance and/or make more balanced steps. Auditory rhythmic entrainment programmes have been shown to have substantial success across a range of domains including: rehabilitation after stroke (Beckelheimer, Dalton, Richter, Hermann & Page, 2011), attention deficit hyperactivity disorder (Rice, Marra & Butler, 2007) and
Parkinson’s disease (Dvorsky, Elgelid & Chau, 2011). Such programmes offer benefits both as an effective diagnostic tool and a form of treatment for such conditions. It is hoped that either the auditory feedback or the combination of visual and auditory feedback will help Patrick in his balance and gait task competency.

Perform = As mentioned above the pre-service teacher will utilise a self-monitoring board for Patrick. This board (see Figure 2 below for an example) will list the milestones and achievements of Patrick over the course of the ten weeks and Patrick will be encouraged to pin smiley faces or gold stars immediately following successful completion of the task. For example, during week three of a ten week programme, the target or goal might be for Patrick to manage ten metres of the 20 metre balance test without making a mistake. Week four would extend this goal further, and so on. Getting Patrick to see and feel progress will help him to monitor himself and his progress. Using a self-monitoring board has been shown to work successfully in sustaining physical activity programmes with autistic children (Todd & Reid, 2006). Given the repetitive nature of behaviours displayed by Patrick and many others with autism, increasing the ability to self-monitor will help Patrick to gauge progress and feel more motivated to refine and improve his task performances. This mastery of the tasks at hand should foster an increase in Patrick’s physical competence, his self-perceptions and his psychosocial well-being. Additionally, research literature suggests that an increase in physical activity should decrease Patrick’s maladaptive behaviours (Elliott, Dobbin, Rose & Soper, 1994; Kern, Kogel, Dyer, Blew & Lisa, 1982; Walton & Ingersoll, 2013).
Another important task for the supporting adults in the i-PLAY programme is to observe Patrick every week and complete a social behaviour scale (adapted from Pierce-Jordan & Lifter, 2005; see Figure 3 below) before, during and after each i-PLAY hour. This scale will enable the pre-service teacher to gauge the development of Patrick’s social behaviours and also whether he is engaging in more or fewer maladaptive behaviours (obsession and ritualised behaviours). This log will help the pre-service teacher to provide accurate feedback to Patrick and to adjust the ease or difficulty of the tasks according to his needs.

Teacher Name:  
i-PLAYClass: 5-9 year olds  
Week/Date:  
10 week programme
Social Behaviour Table

<table>
<thead>
<tr>
<th>Participant Name</th>
<th>Behaviour Score Before PA</th>
<th>Behaviour Score After PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patrick Week 1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Patrick Week 2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Patrick Week 3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Patrick Week 4</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Social Behavior Scoring Key:

1- **Solitary**: child sits, plays, studies or engages by him- or her-self in some type of activity; child gazes at the toys in front of him or her or gazes away from the play area (e.g., around the class) without looking at, or interacting with, others.

2- **On-looking**: child gazes at another person or at a person’s actions; child’s social status is that of observer, not participant (e.g., child watches another child build a block tower).

3- **Uncoordinated Social**: child’s verbal and nonverbal behaviours are socially focused, including talking, sharing objects (e.g., gives object to another child), eye contact, or making physical contact (e.g., touch), but the social behaviour is not coordinated with the verbal and nonverbal behaviours of others (e.g., child states, “Look at my tower” and tips block tower before waiting for anyone to look).

4- **Coordinated Social**: child’s verbal and nonverbal behaviours are socially focused, including talking, sharing objects (e.g., gives object to another child), or making eye contact or physical contact (e.g., touch), and the behaviour is coordinated with the verbal and nonverbal behaviours of others; that is, the child coordinates his or her focus
of attention and timing of language or actions with the focus of attention and timing of language or action of others (e.g. child states “Look at my tower” and tips block tower after obtaining someone’s attention.

Figure 3 (adapted from Pierce-Jordan & Lifter, 2005): An example of a Social Behaviour Scale to be utilised with Patrick during i-Play

**Reward** = On successful completion of the tasks Patrick will be rewarded by getting to pin a smiley face to his monitoring/motivation board. Additionally he will receive praise from the teacher and anyone in attendance.

The ten-week biopsych programme described for Patrick is a combination of research evidence and observations developed over time and incorporated into the i-PLAY programme. The traits and preferences of individual children will always provide a unique teaching environment and in this regard, the teaching of all children should be personalised. The challenge is in identifying what works best for the individual and Patrick’s case illustrates some of the physical activity support needs of one individual child with autism.

**SECTION 3: AN ADAPTED PHYSICAL EDUCATION PERSPECTIVE**

Research has suggested that most physical education teachers have had limited or no formal training (i.e. courses or workshops) in teaching young people with disabilities
The same can be said for pre-service physical education teachers. Initial teacher education (ITE) programmes tend to offer only one course or module to ‘prepare’ students to plan and teach ‘diverse populations’, including young people with special educational needs (Hardin, 2005). As a result, newly qualified physical education teachers can feel unqualified to teach young people with disabilities or those with particular special educational needs.

One form of disability of particular concern to physical education teachers is the pervasive developmental disorder of autism, as exhibited by Patrick. Pervasive Developmental Disorders (PDD) is characterized by severe and pervasive impairment in several areas of development: social interaction skills, communication skills and the presence of stereotyped behaviour, interests, and activities (Auxter, Pyfer, Zittel & Roth, 2010). The four most common forms of PDD are Autistic Disorder, Asperger’s Disorder, Rett’s Disorder, and PDD-NOS (not otherwise specified). It is the Autistic Disorder, or autism, that is the focus of this case study.

Classic autism, also known as Kanner syndrome, was first described by Dr. Leo Kanner (Kanner, 1943). Characteristics of the autistic disorder include significant developmental delays, global and comprehensive language disorders, abnormal and stereotypical behaviour patterns, social isolation, and, in some instances, intellectual disabilities. Children with autism, such as Patrick in this case study, may exhibit, in varying degrees of severity, symptoms in addition to those mentioned earlier, including:

- Inappropriate laughing or giggling
- No real fear of dangers (e.g., running into traffic)
• Apparent insensitivity to pain
• May avoid eye contact or touch (e.g., hugging)
• Uneven verbal or physical skills
• Difficulty in expressing needs (may use gestures)
• Inappropriate attachments to objects
• Echoes words or phrases
• Spins objects or self excessively

Teaching strategies for use with Patrick

Research suggests that daily vigorous, aerobic exercise is beneficial for students with autism (Richardson & Langley, 1997; Todd & Reid, 2006). It reduces self-stimulatory and off-task behaviour, increases time on academic and vocational tasks, and can help to improve gross motor performance. From a pedagogical perspective, when teaching children such as Patrick, numerous methods or ‘systems’ have proven to be successful for physical education teachers. There are numerous examples of such methods including Daily Life Therapy, Treatment and Education for Autistic and Communication-Related Handicapped Children (TEACCH), Applied Behavioural Analysis, and reinforcement strategies such as the Premack Principle. These are all systems that have proven effective when engaging children with autism in the educational setting and each is explained in more detail below.  

Daily Life Therapy (DLT) (Howlin, 2005; Quill, Gurry & Larkin, 1989) utilises physical regimes to promote independent living and self-esteem with a particular emphasis on vestibular system stimulation (i.e., spatial awareness – body in space, moving, balance,
etc). From a physical education perspective, when maturation of the system is delayed, students may demonstrate problems in the following ways:

- Inability to balance on one foot (particularly with the eyes closed)
- Inability to walk a balance beam without watching the feet
- Inability to walk heel-to-toe
- Inefficient walking and running patterns
- Delays in ability to hop and to skip

The TEACCH system (Hume & Odom, 2007) is another effective method suitable for Patrick. Due to children with autism demanding consistent and predictable routines as a way to engage with their environment, the TEACCH system requires the identification and implementation of specific routines. The learner and an adult participate in a meaningful activity that requires consistent communication. The system relies on five components to be in place and to be optimal in order for it to be effective: (i) the physical structure of the environment, (ii) the scheduling of the person’s overall day and week, (iii) expectations of how the person will work (the work system) during tasks, (iv) routines incorporated within a learning environment, and (v) visual schedules to assist in the actual structure of the learning session. In particular, visual schedules, or picture exchange communication systems, could be very useful for Patrick. They allow him to trade a picture of an item or experience for what he wants to do. Additionally, visual schedules use pictures to help Patrick predict what will occur during the day. For example, each i-PLAY session begins at the picture board so that Patrick and his
‘coach’ can go over the activities for the day. A typical schedule would include a warm-up game, fitness focus, water break, lesson focus, and closing game (see Figure 4).

Figure 4: An example of a picture board

Applied Behaviour Analysis (ABA) (Grey, Honan, McClean & Daly, 2005) and the Premack Principle (Premack, 1959) are more traditional and recognised methods for engaging students with autism. The ABA approach is characterised as a series of trials that involve instruction, a prompt, an opportunity to respond followed by appropriate feedback for the student. The Premack Principle looks to prompt young people with autism to participate usually through a token system of different forms of ‘if/then’ statements (e.g., “If you do two more fitness circuit stations then we can shoot baskets for 5 minutes.”).

An important point to be made about these and other ‘systems’ is that they have been designed to be progressive and engaging for those children who face some of the biggest challenges to being physically active. They can offer very helpful frameworks for those supporting adults who feel they lack appropriate knowledge and experience.

School physical education progressions for Patrick

Given that Patrick is seven years old, the emphasis of his primary physical education experience should focus on developing a range of fundamental movement skills. This
will include cardiovascular endurance activities, whole body movements, and dance and rhythm activities to foster parallel body part identification. Play activities are also important to move Patrick from onlooker, to solitary play, and then to parallel play engagement. As Patrick grows older, his physical education experience should continue to focus on cardiovascular endurance activities and also include functional locomotor skills. Such skills might include the use of different surfaces, manoeuvring around a variety of obstacles while carrying objects or pushing objects, rhythm activities and low-organisation games, higher level equilibrium activities, and games with very simple rules. As Patrick progresses to post-primary (age 11 onwards) the emphasis of his physical education experience should continue to be improving cardiovascular endurance activities. In addition, he should learn about basic leisure, recreation, sport and fitness skills that can be undertaken individually, as relaxation training, and as community-based activities.

Modifications / Adaptations / Inclusion techniques

Issues relating to Patrick and his level of autism will present challenges for the teacher. Yet, high functioning learners with PDD can be successful in the general physical activity programme when teachers implement appropriate modifications, adaptations, and inclusion techniques (Auxter, Pyfer, Zittel, & Roth, 2010). Essentially, teachers must be well organised and provide developmentally appropriate activities for Patrick, emphasising cooperative with appropriate competition. It is equally important that positive behaviour management techniques are used as well as recommended teaching strategies.
SECTION 4: PEDAGOGICAL COMMENT

From the outset, it was made apparent that Patrick prefers repetition, sameness and structure in his environment and the activities in which he is engaged. We also note that he does not like change and avoids interacting with others, preferring to work on his own. Comments from the biomechanics, psychology and adapted perspective all highlight similar goals for Patrick, specifically related to increasing his social interactions and engagement in physical activity. From all three perspectives it is suggested that progressive task development in these areas, and adaptation to need, are essential if Patrick is to make optimal progress and develop confidence and competence in his skills and abilities.

In sections 2 and 3 above, we conclude that understanding Patrick and his preferences and traits is critical to designing effective learning environments and activities. It is worth remembering, however, that all physical education classes are composed of diverse groups of students. Pupils will range from highly skilled boys and girls who are motivated to be successful, to those for whom motor performance is difficult leading to a low confidence and desire to participate, and all levels in between. There will be young people who come from physically active families who support and encourage physical activity participation and those whose parents are more concerned with other aspects of school and discourage physical activity involvement. Students will be tall, short, ‘skinny’ and heavy, racially and ethnically diverse, hail from urban and rural communities, and will - or will not – have apparent or declared disabilities (physical, emotional, behavioural, and cognitive). When teaching in these diverse classrooms, and whether teaching students with or without disabilities, physical education teachers and coaches
using pedagogically sound strategies will use similar teaching/coaching approaches. Tannehill, van der Mars and MacPhail \(\text{(in press)}\) argue that effective teachers are active teachers who keep students consistently engaged in learning tasks, use individual, partner, small group and whole-class instruction, and attentively supervise student practice adjusting tasks to meet the needs, abilities and developmental levels of all students. These characteristics are required for all classes of pupils but, as Houston-Wilson, Dunn, van der Mars and McCubbin (1997) suggest, when teaching students with severe disabilities there is likely to be an increased emphasis on adaptations, modifications, and supports.

Learning tasks as content development

Dyson, Griffin and Hastie (2004) consider the role of the teacher as a facilitator. They suggest that as students engage in an assigned practice task, the teacher should guide learning based on students’ prior knowledge and skill development. As a result of observation of student success, the teacher can then either simplify or challenge through task revision. This is consistent with Rink’s (1994, 1996, 2000) conceptualisation of learning tasks as essentially comprising content development reflected through a task cycle of refining (focus on improving the quality of task), extending (adaptations to tasks to make them more or less challenging) and applying (tasks that require students to apply skills). Teachers must be able to conduct an analysis of content and then, based on the instructional goal for a lesson, design an appropriate progression that moves each student from a novice (less complex) to advanced (more complex) level appropriate to their individual needs and abilities require. The literature is clear that task progressions are ‘key’ to student learning (Rink,
Research shows, however, that teachers’ task development patterns tend to include an ‘informing’ task followed by an ‘application’ ask, with little attention paid to developing students’ quality of performance or practice through more and less complex tasks (Hastie & Siedentop, 1999). In other words, teachers tend to teach a sport skill then immediately place students in game play without first helping them first refine, extend and locate their skills through an appropriate progression of tasks.

Considering task complexity

After a teacher or coach has analysed the content, learning goal and needs of the students, decisions must be made on how to modify or extend task complexity. Chow and Antencio (2012) propose three categories of potential constraints related to increasing task complexity: performer, the environment and the task itself. They suggest that these constraints interact with one another and determine whether the student can select appropriate responses and behaviours that will result in success. Performer constraints include structural and functional characteristics of the learner as discussed by the bio-psych perspective earlier in this chapter. Environmental constraints include both physical and social aspects of the learning context. In Patrick’s case, there was an emphasis on cooperative activities in the adaptive physical education strategies. Task constraints include specific activity rules, task goals, and equipment and facilities, and examples of the ways in which these might be adapted for Patrick have been identified.

Physical activity environment

Silverman, Subramaniam and Woods (1998) suggest that in physical activity environments, student skill level is strongly related to the teaching and learning process.
They argue that if teachers offer frequent opportunities for low-skilled students to practice tasks, this may result in improved learning outcomes. Whether designing appropriate progressions to meet the needs of all learners, using teaching strategies shown to be effective with different learners, or accessing available instructional aides to facilitate student learning, the ‘key’ is to focus on the individual learner within a class of diverse students. Patrick may not be as successful as his more physically able peers, and he faces considerable challenges in performance levels in most activities. It is important for teachers and coaches to remember, however, that making adaptations to activities to help children with disabilities is likely to be a helpful strategy for other low-skilled children too. Indeed, at all points on the spectrum of ability, modifying tasks to ensure progression for different learners is a founding principle. In other words, an effective teacher or coach will always focus on the student, modify, adapt and utilise inclusion techniques to meet the needs of all learners.

SECTION 5: KEY REFERENCES AND RESOURCES


References


