This study examined how eight participants in six schools implemented and evaluated Smart Start with PMP, a programme claimed to enhance motor skills and language and to raise students’ self-awareness and self-esteem. Teachers and others involved demonstrated a high degree of blind optimism, implementing the programme without any thorough prior or subsequent evaluation. Considerable faith was seemingly put in the package as a cure-all for students’ deficits in motor development and general learning. The findings raise questions about other curriculum initiatives that may be implemented with a similar mindset. The study concludes with recommendations for schools looking to implement such a package.

What is a perceptual motor programme?

A perceptual motor programme (PMP) is one in which students move and manipulate their bodies in relation to external objects to match up what they perceive with what is reality (i.e., what they think they hear, see, and touch). Perceptual information is matched to motor information so that both come to have the same meaning. PMPs are different from fitness or physical education programmes because they focus on perceptual motor skills as well as other motor skills. A PMP “aims to teach children perceptions and understanding of themselves and the world around them through motor experiences” (Bulluss & Coles, 1994, p. 5). Common to many perceptual motor programmes is the objective of supporting students in developing the following skills:

- balance;
- co-ordination;
- locomotor movements;
- spatial awareness;
- laterality;
- directionality; and
- perception.

Smart Start with PMP is a PMP created and developed by Bulluss and Coles, two Australian primary school teachers, in 1987. It is a package deal and includes in-service training, literature, resources, and equipment. The main resource is a teachers’ manual (Bulluss & Coles, 1998). There is an extensive variety of equipment required to implement this programme, including activity cards, language follow-up activities, music tapes, videos, and a large amount of apparatus that must be built, purchased, or gathered.

Smart Start with PMP consists of three different types of session: language sessions that transfer concepts, knowledge, and understanding to the classroom, floor sessions for preparation that take place once a week, and equipment sessions that take place up to four times a week. Each equipment session consists of five “stations” (balance, fitness, co-ordination, eye tracking, and locomotion).

Method

The research population included primary school teachers and their principals working in New Zealand schools currently implementing Smart Start with PMP. All six schools in the study choose to implement this programme because they believed it assisted students with school readiness.

The scale of the research project limited the number of possible schools to be sampled. Six schools were randomly selected from 15 possibilities. Quota sampling ensured that no more than one teacher and one principal interviewed from the same school were included in the data collection. All eight participants agreed to take part in the project, with two schools drawing on the expertise of both their lead teacher and the principal. Face-to-face interviews allowed the opportunity to modify the line of enquiry and follow up on interesting responses. Participants were asked about the programme and how it was implemented in their school. Five of the participants were teachers, two were principals, and one was a teacher aide. All five teachers taught at the Year 1–2 level.
Semi-structured interviews with five teachers, one teacher aide, and two principals were conducted and then coded by key words and phrases. Data were compiled into a matrix, which compared similar statements and recorded their frequency of occurrence, thus identifying common themes and issues.

**Data analysis**

The data were further analysed using Kerlinger’s (1979) inductive category coding, enabling comparisons to be made across categories. Then a fine-tuning process took place where the categories were refined. If a category did not consist of many quotes from the sources of data, it was eliminated. Unique comments were given due consideration.

**Findings**

All eight respondents were very positive about the programme. It was well supported by management, well funded (extremely so in one case), and appeared to have community support as well. If there was a criticism, it was that it was labour intensive and that parent or other adult help was often hard to find.

**Choosing and maintaining the programme**

The findings highlighted that four factors influenced participants’ choice and maintenance of the programme:

- the popularity of the programme;
- the perceived needs and benefits;
- participants’ philosophical orientation; and
- blind optimism.

**1. Popularity of the programme**

Despite five out of the eight participants classifying themselves as having little or no knowledge of PMPs in general, Smart Start with PMP was welcomed with great enthusiasm. Three schools partly chose the programme because it was supported by Resource Teachers: Learning and Behaviour (RT:LBs). Ashton and Gregoire-Gill (2003) note the deference teachers accord authorities in adopting new programmes. Other participants had heard about the programme from colleagues in neighbouring schools. Some participants were influenced by the reputations of educationalists who endorsed the programme. Gingiss, Gottlieb, and Brink (1994) argue that programmes go in and out of popularity for reasons related to the particular programmes’ social reputations. Teachers involved in educational programmes are often influenced by what programmes other schools are implementing and what teachers perceive the practical implications to be. In addition, as Goddard (2003) points out, collective efficacy also creates a sense of comfort with collectively held ideas, so that if staff perceive themselves to be collectively achieving they would also value the ideas. While this was not expressly explored, the wholesale endorsement in these schools suggests collective efficacy may have been a factor.

Overall, there was an unquestioned acceptance by participants of the need for and benefits of PMP within the primary school curriculum. This acceptance was also subscribed to by boards of trustees, RT:LBs, and in one case a charitable organisation.

**2. Perceived needs and benefits**

The participants were asked what they saw as the three most beneficial aspects of the programme for the students. Their responses were: enhanced physical activity, social interaction, and academic gain.

The participants believed that the programme provided children with an opportunity to socialise and interact with other children in a play type environment. Additionally, participants perceived that the physical and social skills thus gained generally enhanced other curriculum areas. However, none of the participants had been involved in gathering data from their own schools to evaluate this aspect of the programme despite the programme’s having been in some of the schools for more than 2 years.

All the participants identified Smart Start with PMP as having a positive influence on the increased academic opportunities for the students. Participants reported an increase in student concentration. This indicates that the participants perceived some impact on academic ability as a result of developing perceptual motor skills. Again, however, hard data regarding achievement gains were not available.

Studies seeking cause and effect relationships between academic performance, perceptual motor development, and PMP have been inconclusive (Kavale & Mattson, 1983; Meland & Sovik, 1993; Polatajko, Kaplan, & Wilson, 1992). While some researchers with personal experience and current involvement in PMP felt that PMP enhances students’ academic ability, lengthy research into this area has failed to provide sufficient evidence to support these claims. It is interesting to note that such research has not been carried out in Australasia. It also appears that there
is a lack of longitudinal studies on the effects of such programmes. What is suggested is that developing the perceptual motor ability of a student will impact positively on their self-confidence and consequently result in improved classroom behaviour and increased ability to engage in class activities. This remains to be proven, and it is not established whether academic gains follow. Unless rigorous assessment is undertaken, such consequences will never be known.

3. Participants’ philosophical orientation
In this study the philosophy underpinning the idea that Smart Start with PMP imbues confidence was clearly in agreement with the values of participants. Participant 1 stated: “It gives kids a lot more confidence, they work a lot more confidently, they have greater body awareness, they’re just more focused and composed...” Teachers, like others, make many decisions based on their own values, beliefs, and personal preferences (Tatto & Coupland, 2003).

Sequenced learning, success-based teaching, and a developmental approach to learning (Bulluss & Coles, 1998, p. 9) also seemed to appeal to the participants in this study. The strong alignment between the participants’ teaching philosophies and the New Zealand national curriculum and early childhood curriculum, and the congruence of those values with the programme aims, seemed to add credence.

In terms of the application and implementation of the programme, Gingiss et al. (1994) perceive the strongest predictors of initial implementation to be personal involvement with the programme and its likelihood of continuation. Smith, McCormick, Steckler, and McLeroy (1993) and Rohrbach, Graham, and Hansen (1993) suggest that support from the principal is highly beneficial and that the training, professional development, and experience of the staff are also essential components in the development and maintenance of a programme. All participants were involved and contributed to the management of the programme. All participants received a high level of support from their management teams.

4. Blind optimism
All participants perceived the programme as being beneficial for the students involved, particularly in the areas of developing physical co-ordination, balance, and locomotion. Some participants also believed there was an increase in students’ academic performance.

Most of the participants had very little knowledge of the programme before implementation. In spite of this, some participants were fully committed to the programme after just a 1-day seminar. Where the principal and teacher were surveyed in the same school, similar positive views were held about the programme. Doolittle, Dodds, and Placek (1993) found that pre-service teacher beliefs about a programme developed further during their personal experiences of it. Moreover, the teacher’s affective disposition may have a profound effect on a student’s attitude to a programme (Aicinena, 1991) and subsequently exerts a significant influence on students’ learning experience (Carlson, 1995; Williams, 1989). Blind optimism may not necessarily lead to intended outcomes but may well still have a significant impact on the values and attitudes of staff and students.

None of the participants carried out feasibility studies before implementing the programme, nor had they read critically evaluative literature. Rather, they accepted the claims made by Bulluss and Coles (1998), the promotion of the programme by RTLBs, and the popularity held by the programme, and appeared to develop and sustain considerable optimism about the nature of the programme.

Evaluation of the programme
Teachers rated parent help as the most important factor in managing the programme. They then prioritised equipment and space, followed by teacher training in the programme. They gave the lowest rating to being able to see the programme being implemented in other schools.

Most of the participants in this study did not view evaluation as a necessary component of the programme. Most of the participants had used the criterion reference skill grid supplied by Bulluss and Coles (1998). This grid simply states whether a student does or does not complete a set task. It does not demonstrate progress along the continuum of success. Gravois and Gickling (2002) point out that assessment plays an important role in providing data to produce optimal learning and teaching conditions. To plan and deliver effective instruction that leads to maximum student improvement, assessment data need to be integrated into the programme. The practice in this case therefore falls short of what the literature states to be best practice. As Ysseldyke and Elliott (1999, cited in Gravois & Gickling, 2002) suggest, effective instruction is composed of four major components: planning, managing, delivering, and evaluating.

One participant, who had been involved in PMP for a number of years, was in the process of developing a more comprehensive evaluation by developing pre- and post-tests. Another participant made anecdotal notes every 5 weeks, and so over time did have a running record of individual progress. One explanation for the relaxation around evaluation might be the blind optimism discussed earlier. That is, participants accepted the programme to be of high value and therefore did not perceive the need to evaluate student progress in any other form other than criterion referencing.

Recommendations for future stakeholders
The findings of this study highlighted the following three points: the nature of the decision-making process in adopting a programme, the need for effective evaluation, and the need for professional development both of teachers and supporting adults.

Decision-making process
Participants in this study appeared to make decisions regarding programme choice based on resonance with their own perceptions and on the views of those whom they considered significant. The popularity of Smart Start with PMP coupled with its strong alignment to participants’ philosophical orientation made this programme highly desirable. Without examination of empirical evidence, the decision to implement the programme seemed to appeal both emotionally and logically based.

This rationale might be explained by two theories of human decision making. The first position argues that we make decisions in a logical manner. That is, when faced with a problem we tend to list all the different options and possible outcomes. Then we apply a cost/benefit type of logic to the problem. The second view considers decision making and reasoning to be associative. Thus, when confronted with a situation that requires a decision, we tend to compare it with similar situations we have encountered in the past.

Recently, however, another explanation for our decision-making processes has come to light. Damasio claims that reasoning depends on emotional processing and associated feelings as well as on the factors already described (Damasio, 1994). This view emphasises that reasoning is not disembodied but instead uses biological information to bias and direct the decision-making process towards outcomes that are advantageous, based on past experiences.
Schools also need to evaluate the cost of such programmes, not only in monetary terms but also in terms of what curriculum areas need to be forgone in order to implement them.

with similar situations. Damasio presents a “somatic marker” hypothesis, which explains how emotions are biologically indispensable to decisions. His research on patients with frontal lobe damage indicates that feelings normally accompany response options and operate as a biasing device to dictate choice (Damasio, 1994). It would seem that the participants in this study relied strongly on “gut feelings” alongside other factors such as the popularity of the programme and the endorsement of an RT:LB. These feelings, as noted by Ashton and Gregoire-Gill (2003), are often guided by remarkably robust prejudices.

If schools are implementing programmes (such as the one in this study) based largely on the “feel good” factor then one has to wonder how many other curriculum programmes have been implemented using the same reasoning processes. Knowing that emotions feature significantly in developing decisions makes it even more important to fully research the worth of a programme.

Bulluss and Coles (1998) appear to base most of their rationale on common sense and a “practice makes perfect” philosophy. They state that the programme is “not a physical education program alone or music or fitness or dance or gymnastics…”, but it does use “…facets of all of the above… It is a PERCEPTUAL motor program where LANGUAGE is the key factor in providing the perceptual knowledge about the motor experience” (1998, p. 7). They present no scientific rationale for the programme, although a number of diagrams are provided that purport to show how language leads to expanded language (facilitated by movement), which in turn is claimed to lead to better total performance in physical education skills, oracy, literacy, and numeracy.

In effect, the Smart Start with PMP rationale appears to be little more than a list of lofty objectives and aims. For example one section states, “…our first and most important aim of the programme: developing confidence in himself, his world, his peer and his teachers” (1998, p. 3). Another page states: “The program’s prime aim is to be preventative rather than curative” (p. X). Since learning is a cumulative process, it would seem to make more sense in the development of academic gains to simply provide appropriate experiences derived from extensive, accurate contextualised assessment.

Need for effective evaluation

Project findings show that it would be advantageous for the schools represented in such a project as this to devise rigorous qualitative and quantitative evaluation. This would ensure that activities were being tailored to accurately meet individual students’ needs. It would also track progress made by the students, highlight specific learning needs, and illustrate programme shortcomings. Accurate measurement would enable schools to take part in their own research on the programme or to contribute more effectively to the research of others.

Perhaps there is a role for RT:LBs and other outside agencies in supporting schools to evaluate such programmes effectively. Agencies and teachers could work together to produce assessment techniques and tasks that illustrate the best ways of assessing learning and provide feedback to learners. Strategies would need to be developed that locate students on a developmental continuum and provide learning experiences that help students move on to the next level. Feedback from such evaluations could be provided to the programme designers and would help schools, and clusters of schools, become more objective in their analysis of the specific elements of such a programme.

Schools also need to evaluate the cost of such programmes, not only in monetary terms but also in terms of what curriculum areas need to be forgone in order to implement them.

Conclusion

All six schools successfully implemented the programme in the form recommended. Some participants faced limitations along the way such as lack of parental support and funding. However, through creative thinking, most participants were able to overcome these. What the findings suggest, however, is that while participants implemented the programme with great gusto, they seemed to have little understanding of PMP and its efficacy, how to assess student progress, and how to evaluate the programme and the teaching. It is difficult
to pinpoint exactly why the programme was chosen except to say that it resonated well with participants’ personal and professional views on teaching and learning. For some participants the programme was endorsed by outside agencies, and this, coupled with its seeming popularity, made the programme most attractive. Given that emotion seems to play such a role in such decision making, schools and teachers are cautioned to examine the literature evaluating programmes carefully for supporting empirical evidence before taking them up and to then put in place appropriate student assessment and programme evaluation.

References


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Comment from the authors

As authors of the Smart Start program, our major concern with this article is that it belittles teachers’ professional judgement by effectively saying that they are people who take on “fads” and use programs with “blind optimism”. Teachers are professionals who make value judgements all day, every day, about the outcomes of programs and their effectiveness.

Smart Start with PMP is now used in many countries in the world including Australia, New Zealand, Scotland, Oman, Hong Kong, Singapore, and India by teachers who have brought both objective and subjective judgements to decisions about the programs they use. Teachers will be delighted to see the comments by Eric Jensen in Rae Pica’s book Your Active Child: How to boost physical, emotional, and cognitive development through age appropriate activity. He says “Movement has strong, positive cognitive, emotional, social, collaborative, and neurological effects...It makes strong sense that a variety of movement activities should support and sustain every child’s education.”

The authors wish all those using the program well, knowing that the time and effort put into it is worthwhile and has been found to be so by practising teachers all over the world.

Judie Bulluss and Peter Coles