MASSEY UNIVERSITY
COLLEGE OF EDUCATION
TE KUPENGA O TE MĀTAURANGA

Evaluation of the 'tips for autism' Professional Learning and Development Programme

Massey University College of Education

March 2011

Summary Report

TABLE OF CONTENTS[1]

---

[1] This Report follows a structure established by the Ministry of Education and addresses content and questions posed by the Project Manager and Director of the 'tips for autism' programme.

PART 4: Is 'tips for autism' a Good Example of an ASD-Specific Professional Learning and Development Programme?

PART 5: How can these findings be helpful to the Ministries of Education, Health and CYF in future decision-making?

PART 6:

APPENDICES

TABLES

ACKNOWLEDGEMENTS

Dr Janis Carroll-Lind, School of Curriculum and Pedagogy, Massey University College of Education and Office of the Children's Commissioner;

Dr. Alison Kearney, School of Curriculum and Pedagogy, Massey University College of Education;

Dr. Mandia Mentis, School of Education, Massey University, Albany.

PART ONE

What we were asked to do; what we did and why; what were the implications and limitations of the approach taken?

BACKGROUND AND PURPOSE

In June 2007 the Ministries of Education and Health, together with Child, Youth and Family (CYF), a service of the Ministry of Social Development, contracted a team from Massey University to evaluate a professional learning and development (PL & D) programme for people who work with and/or care for children with autism spectrum disorder (ASD). The contract spanned three years. During the first year, the focus was on 'tips extended', a pilot programme for those supporting children with ASD who were also in the care of CYF. The Ministry of Education also funded the Massey team to evaluate, over a three-year period, the on-going 'tips for autism' programme. This is an education-focused programme which has been running throughout New Zealand since 2001. It was "designed in New Zealand, for the NZ education and wider social services contexts, and builds on current evidence about effective adult learning and ASD."[2]

The purpose of the 'tips' evaluation was to "inform the future development of the programme" and to "yield lessons for other professional learning and development initiatives around ASD"[3]. To achieve these objectives the evaluation team was required to address a series of ten questions developed and prioritised by the Ministries of Education, Health and CYF (see Appendix One).

METHODOLOGY

Overall Design

The evaluation used a mixed method design for the type of information sought, the data collection methods used and the interpretive approaches taken. Both quantitative and

---

[2] Ministries of Education and Health & CYF (2007) *Call for expressions of interest in evaluating a professional learning and development programme,* p.3

[3] Ministries of Education and Health & CYF (2007) *Call for Expressions of Interest in Evaluating a Professional Learning and Development Programme,* p.3

qualitative methodologies were used. This approach enabled varied, wide-ranging data to be collected and allowed triangulation of findings across settings and information sources.

In addition, the evaluation team used a participatory, collaborative approach. Stakeholders were consulted to ascertain what they considered were essential components of a PL & D course on ASD and what were meaningful "outcomes" for them. As with any learning context, evaluations have two broad goals: first to determine the goals and subsequent achievement of the individual through the learning context, and second to determine how effectively the programme enabled that learning to occur. Therefore, for the purposes of this evaluation, qualitative, quantitative and collaborative methodological approaches were used to investigate the "why", "how" and the "how much" components of learning.

Finally, the evaluation had a goal-free, needs-based, open-ended focus. Using a variety of data sources to ascertain the evaluative criteria enabled multiple stakeholder input and allowed for both intended and unintended effects of the 'tips for autism' programme to be identified and considered.

Evaluation Components

The evaluation consisted of four principal and one subsidiary component: needs assessment; case studies, quantitative data analysis; 'tips for autism' programme information and documentation; and a brief literature review. (See Appendix Two for full details of these components.)

Data-gathering Methods

The evaluation team used five data gathering measures and strategies:

1. written surveys/questionnaires
2. face-to-face interviews
3. observations
4. document analysis
5. Advisory Group and expert consultation

(See Appendix Three for more details of the data-gathering measures)

Table 1 shows which measures and strategies were used for each priority question over the three-year evaluation period

Table 1: Evaluation Overview

Priority evaluation questions	Pre-course survey	Pre-course interview & observation (CS)	Course Observation	Final course feedback	Post-course survey at four/six months	Interview at four/six/nine/eleven months (CS)	Facilitator interview	CYF manager & Organiser interview	Documentary analysis	Literature Review	Advisory & Expert input
1	x	x			x	x	x		x	x	x
2	x	x	x	x	x	x	x	x	x		
3	x	x		x	x	x	x		x		
4	x	x	x	x	x	x	x		x		
5					x	x			x		
6	x	x			x	x	x				
7					x	x			x		
8					x	x					
9					x	x					
10					x	x					

Evaluation Approach

The CYF and Year 2 Education evaluations used Davidson's[4] methodology to analyse data collected and to structure the respective reports. This methodology was chosen for two main reasons. Firstly, Davidson's work had influenced the Ministries' thinking and approach in developing the priority questions for the 'tips' evaluation and so it was considered to be an appropriate choice for the consequent evaluation. Secondly, Davidson's Key Evaluation Checklist (Appendix Four), which provides the framework for the first two reports, is based on Scriven's renowned evaluation research where ingredients necessary for a "solid evaluation"[5] were identified and trialled. Hence the methodology adopted for this evaluation was well researched, respected, rigorous and transparent.

---

[4] Davidson, E.J. (2005). *Evaluation Methodology Basics. The Nuts and Bolts of Sound Evaluation.* Thousand Oaks: Sage Publications

[5] Scriven, M. (2003). *The key evaluation checklist.* Available online: http://evaluation.wmich.edu/checklists/

Briefly, the main thrust of the Davidson approach involved:

(1) identifying the components (merit criteria) of a "high quality, valuable, cost-effective professional learning and development programme." This step drew on information from six different sources and was analysed, summarised and sorted into Process and Outcome areas and assigned to four relevant categories (Appendix Five);

(2) deciding on the relative importance (weighting) of each merit criteria;

(3) developing a grading rubric which could be applied to determine the quality of the 'tips' programme (Appendix Six);

(4) examining all evaluation data collected as examples of merit criteria and for any concerns raised;

(5) applying the grading rubric developed at step 3 to the data gathered;

(6) developing a second rubric for interpreting % scores allocated to different data sets at step 5 (Appendix Six);

(7) applying the second rubric to determine overall significance of the 'tips for autism' programme and answer Davidson's questions: "What are the main areas where the programme is doing well? Where is it lacking?"

Davidson's methodology provided a sound base from which to answer most of the priority questions. In conjunction with the contract manager in the Ministry of Education and Keryn Mells, the 'tips' Project Leader, the evaluation team decided that the level of detail and analysis afforded by this approach was not needed for the Year Three Report. Consequently, in Year Three, thematic analysis and summaries were used for qualitative data and quantitative data were analysed using the SPSS tools described in Appendix Two.

Evaluators' Reflections on the Methodology and Organisation of the Evaluation

Strengths

An overall strength of the evaluation was its use of a mixed methodology in respect to the nature of the data collected, the data collection methods used and the interpretative approaches taken. The pre- and post-course surveys and 'tips' evaluation forms provided sound quantitative data which were complemented, scrutinised and illuminated by the rich detail gained from the qualitative interviews, case studies and observations. Additionally, assessment of children's work samples, individual education programme plans (IEPs), school

reports and plans developed at Year Three courses, together with documentary analysis of the wide variety of background and programme information provided by the 'tips' Project Leader added further breadth and depth to the evaluation. Using both quantitative and qualitative data allowed changes made, or not made, to be understood within their real life context. It also enabled findings to be triangulated thus adding to the rigour of the evaluation and to the strength of the findings.

A further strength was the use of Davidson's Key Evaluation Checklist to guide the evaluation in Years One and Two. This methodology provided a process by which merit criteria could be identified in the CYF evaluation and tested, confirmed and refined in the following Education evaluation. It also provided a means by which the "value" of the 'tips' programme could be measured. Unlike many evaluation methodologies where the reader is left to make their own judgement about the worth of what is being evaluated based on the data presented, the Davidson approach provides a clear summation of worth based on criteria and measures that are quantifiable, explicit and apparent. The specificity of this methodology added to the richness of the data reported and to the transparency of the evaluative decisions. The strategies used produced a robust and informative evaluation.

A final strength was the longitudinal nature of the evaluation. Although some changes were made to the 'tips' programme over the three years of the evaluation, collecting data from 837 participants in 169 teams who attended 28 courses over a three-year period provided a sound basis from which to make evaluative judgements.

Weaknesses

A number of criticisms could be made of the evaluation methodology.

At a data level: the low survey response rates in Years One, Two and the post-course survey in Year Three were of concern. Although the actual number of returned surveys provided ample data to analyse, the robustness and validity of the findings were lessened because they were, in general, based on information from only one third of participants. (It should be noted, however, that having facilitators distribute and allow time for completion of the Year Three pre-course survey on the first morning resulted in raising the response level to 78.4%).

Secondly, the evaluation was, in the main, based on self-reported, subjective assessments and opinions. For example, the pre- and post-course surveys asked participants to rate their own understandings, knowledge and skills. Because no objective measures were used it was not

possible to determine the accuracy of the gains reported. In respect to the focus children, some longitudinal objective data was considered e.g. work samples, reports, on-task observation scores, however this was minimal in comparison to the more subjective opinions of interviewees and survey participants' ratings of children's progress.

At an organisational level: the timing of the evaluations was problematic. The full analysis and report writing for Years 1 and 2 overlapped with the respective data collection phases for Years 2 and 3. Consequently, although some changes in the 'tips' programme and the evaluation measures and procedures were made from one year to the next, the lessons learnt from the previous evaluation could not be fully capitalised on. On reflection, given the similar findings from the first two years, the evaluators believed that instead of gathering "more of the same" data in Year Three, it would have been more useful to focus attention on areas of weakness identified in the first two years in order to come up with possible solutions to these problem areas.

At a methodological level: a major limitation relates to a general difficulty of evaluations of this nature, that is of proving causation. While interview and survey data contained many comments about what participants learnt from the course, attributing students' gains to participants' increased skills and knowledge is, perhaps, an impossible task. As Davidson states, "even if we observe changes that are consistent with the expectations or goals of a program or another evaluand,[6] we cannot correctly refer to these as "impacts" or "outcomes" unless we can demonstrate that the evaluand was at least a primary cause of those changes" (p.67). This difficulty in proving causation is magnified further down the causal chain because of the increasing number of factors that can potentially contribute to changes for the participants' and focus children. Determining the role and the relative influence of the 'tips' course in this respect was a major challenge.

A final difficulty relates to the use of Davidson's methodology. Firstly, it is extremely time-consuming – the initial process of identifying and establishing merit criteria, the subsequent analysis of all evaluation data to locate examples of identified and unidentified merit criteria, reliability checks to ensure consistency of criteria categorisation and frequency counts of merit criteria examples needed to apply grading rubrics are all lengthy tasks.

---

[6] Evaluand refers to what is being evaluated

Secondly, validity issues can be raised. The goal-free approach taken for this evaluation generally relies on participants mentioning specific criteria in order for them to be 'counted'. Important criteria may be assumed, subsumed, inferred or even forgotten but this does not mean that they are not present in the 'tips' programme. Additionally, the evaluation measures were developed to answer the priority questions posed by the Ministries of Health, Education and CYFs. Because of the nature of these questions, certain criteria were specifically probed. Consequently, multiple references were made to them. In a process that relies heavily on frequency counts to determine areas of weakness, strength and the overall value of a programme, focusing on particular criteria in order to accommodate the priority questions, can potentially bias the evaluation findings.

A third difficulty in relation to the use of Davidson's Evaluation Checklist lay in reporting data in the form prescribed by the methodology while at the same time addressing the priority evaluation questions. Although the development of these questions was actually informed by Davidson's methodology, the questions did not always fit comfortably into the checklist reporting structure. These methodological difficulties, at times, left the evaluators in the compromising position of 'trying to serve two masters' but not having the time or resources to do justice to either.

Further Reflections

The evaluators were divided on whether they would use Davidson's methodology for future evaluation projects. Some were uncomfortable with the rigidity and prescriptive nature of this approach while others welcomed the quantifiable, evidence-based aspect which contributed to them feeling more able and confident in making recommendations based on the findings. There was a consensus, however, that this methodology would be more suitable for some types of evaluations than others and if used it must be fit for the purpose intended.

In hindsight some of the weaknesses mentioned above could be accommodated, lessened or even overcome:

- The time-consuming nature of this methodology needs to be provided for in any evaluation contract.
- The first step of the process should involve identifying and establishing merit criteria through consultation with stakeholders, experts and relevant literature and

documentation *prior* to beginning the evaluation. This would enable the development of more focused, valid evaluation measures.

- Merit criteria need to be precise, unambiguous and limited to a number that is manageable given the time and resources available. While the evaluators were supportive of the differentiation made between process and outcome criteria, and between the four categories of (a) organization, content and design, (b) delivery and implementation, (c) knowledge, skills and attitude gain and (d) application of knowledge skills and attitude, in practice they often found it difficult to categorise data into these four categories. Having more focused questions and more precise criteria would hopefully overcome this difficulty.

- An approach worth trialling would be to have broad overarching categories with more targeted subcategories.

- Exemplars of particular merit criteria would also be helpful for categorisation purposes as would a step-by-step rubric to guide categorisation. These strategies would assist the reliability of data categorisation.

- If possible, a pilot evaluation using the methodology should be conducted and then amendments and refinements made for the evaluation proper.

PART TWO

What would a good ASD-specific professional learning and development programme look like?

COMPONENTS OF A HIGH QUALITY PROFESSIONAL LEARNING AND DEVELOPMENT PROGRAMME

This section summarises the evaluation response to Priority Question One (a) (asked by CYF and the Ministries of Health and Education): What defines a high quality, valuable, cost-effective professional learning and development programme?

Merit Criteria Revisited

In order to investigate the Part Two focus question, the evaluators examined four principal data sources. These were:

1. Merit criteria identified by Massey team (2007, 2008) [team focused, needs based, knowledge based and pedagogically sound]
2. Literature Review (Appendix 7)
3. New Zealand ASD Guideline (2008)[7]
4. Teacher Professional Learning and Development. Best Evidence Synthesis Iteration[8]

While it is acknowledged that sources 2, 3 and 4 were consulted in the original identification of the 57 merit criteria, it was considered worthwhile to revisit these sources for a post-evaluation reliability check.

---

[7] Ministries of Health and Education. (2008). *New Zealand Autism Spectrum Disorder Guideline*. Wellington, Ministry of Health

[8] Timperley,H., Wilson, A. Barrar, H. & Fung, I. 2007. *Teacher Professional Learning and Development. Best Evidence Synthesis Iteration [BES]*. Wellington, New Zealand Ministry of Education.

Table 2: Components of a High Quality Professional Learning and Development Programme

DATA SOURCES				
Merit criteria identified and later modified by the Massey team (2007, 2008)		Effective practices identified in the Literature Review[9]	Principles of effective professional learning and development NZ ASD Guideline Section 6.2	Teacher Professional Learning and Development. Best Evidence Synthesis Iteration [BES][10]
Team focused	Content: Includes all significant team members. Provides opportunities to establish support networks. Promotes social climate and interaction amongst participants. Process: Facilitates sharing of aspirations, skills, knowledge and understanding. Facilitates collaborative team work. Equally values all team members' contributions.	Provides valuable opportunities to learn from others	Professional learning and development should be offered at different levels to meet the needs and roles of parents, professionals, paraprofessionals, teams, specialists and consultants.	The establishment of professional learning communities identified as important (expert leader, common goals, concerned with the learning of students who had similar needs) (p. 154). [NB. Involvement of parents working with teachers in PD was not identified in BES]
Needs based	Content: Targets appropriate consumers. Is age appropriate.	An open mind that 'one approach does not fit all' will help teaching methods to be based on the child's actual needs.	No one professional learning and development course or method will meet the needs of any group and professional learning and development opportunities need to	Developing content knowledge at teachers' own level (p. 143) Establishes importance of a needs analysis to identify common

---

[9] See Literature Review (Appendix 1) for original sources of components listed

[10] This BES focussed specifically on teacher professional learning

DATA SOURCES			
Merit criteria identified and later modified by the Massey team (2007, 2008)	Effective practices identified in the Literature Review[9]	Principles of effective professional learning and development NZ ASD Guideline Section 6.2	Teacher Professional Learning and Development. Best Evidence Synthesis Iteration [BES][10]
	Is appropriate to the child's level of ability. Is appropriate to the child's culture. Is timely. Process: Focuses on child's needs. Focuses on family's needs. Focuses on professional's needs.		be ongoing and offered in a variety of ways. Professional education and learning at any level, including initial training, needs to include information and learning that affects the attitudes of participants. The consumer's voice and their views on their needs and what they want to achieve must be included.	learning needs.
Knowledge based	Content: Is at an appropriate level for the participants. Is evidence-based and research-based. Provides new learning. Provides knowledge of a variety of effective methods and strategies. Provides practical application of theory. Focuses on ASD-related knowledge, and attributes and issues Increased self-awareness and self-reflection.	Programmes that provide practical content (e.g., curriculum development). Content that influences attitudes of participants. Programmes focussing on multiple approaches. Content that covers assessment, particularly functional assessment. Content specific to ASD (e.g., language & communication). Studies indicate that when theory is valued and skills are embedded over time, participants are more	PL and D with a focus on ASD should take place both during initial training and continue to be available throughout the working life of the professional. The information presented should include the consumers' perspective.	Professional content knowledge strongly linked to theory (p. 143) Relevant content is one of the most important aspects of PD – without it there is no foundation for change (p.96)

DATA SOURCES				
Merit criteria identified and later modified by the Massey team (2007, 2008)		Effective practices identified in the Literature Review[9]	Principles of effective professional learning and development NZ ASD Guideline Section 6.2	Teacher Professional Learning and Development. Best Evidence Synthesis Iteration [BES][10]
	Process: Focuses on learning about the child including their strengths and interests and in different environments.	likely to become more confident and able to generate their own solutions in the future		
Pedagogically sound	Content: Is context specific & relevant. Emphasises a problem-solving approach. Uses accessible language & good quality teaching resources. Incorporates the principles of adult learning. Provides opportunities to experience and understand a child's perspective. Is generalisable, innovative and accessible. Process: Is culturally appropriate and responsive. Incorporates a variety of teaching approaches. Has skilled facilitators Has fidelity with design.	Linking theory to practice important Time needed to reflect on practice, and what was learned.	To be effective participants need opportunities for meaningful interaction and opportunities to observe and practise new skills while receiving coaching, mentoring and feedback. Professional learning and development needs to be in 'quality time', not in 'twilight time'.	Co-construction and an inquiry-based approach helps participants to make meaning in the social context, and to adapt and apply their knowledge in different situations (p. 283).

DATA SOURCES			
Merit criteria identified and later modified by the Massey team (2007, 2008)		Effective practices identified in the Literature Review[9]	Principles of effective professional learning and development NZ ASD Guideline Section 6.2	Teacher Professional Learning and Development. Best Evidence Synthesis Iteration [BES][10]
	Allows sufficient quality time to cover and reflect on course content.			

The information in Table 2 shows agreement across sources and confirms the merit criteria as important components of a high quality ASD-specific PL & D programme.

Dual Focus

The three-year 'tips' evaluation highlighted key aspects that contribute to an effective ASD-specific PL & D. A further consideration of the 57 merit criteria above show components around (a) the content and process for those participating in the course, and (b) outcomes for the children who were the focus of the course. These results indicate that a good ASD-specific PL & D programme simultaneously focuses on the child and the child's outcomes, and the participants' learning and their application of that learning. This dual approach is a win-win situation: participants' learning is facilitated by teaming together to assist and support children and young people with autism. Therefore, it can be argued that an ASD-specific PL and D programme that includes the development of specific goals and a plan for a particular child in an authentic context, results in more successful learning for the participants, *as well as* for the child.

'Tips' Participants' Views

Across the three years (2007-2009) participants in the 'tips' evaluation identified a high quality, valuable, cost-effective professional development programme as being one that is team focused, needs-based, knowledge-based and pedagogically sound. Such programmes provide participants with skills and approaches that can be effectively applied and used in their own context as well as transferred across settings. They acknowledge and utilise participants' previous skills, experience and expertise while building on this to provide new learning. High quality programmes match content and delivery to participants' needs and abilities. They include practical, relevant strategies, problem-solving skills, and post-course support. Parents, in particular, value courses that are accessible, have direct relevance to their children, incorporate information based on best practice, provide take home reference material, utilise humour and are delivered in an environment of trust and empathy.

PART THREE

What we asked, what we found out

SUMMARY OF FINDINGS

The previous section (Part Two) addressed Priority Question One (a): What defines a high quality, valuable, cost-effective professional learning and development programme? Priority Question One (c) is addressed in Part Five. This section contains demographic data and a summary of findings relating to the remaining priority questions across the three years of the 'tips for autism' evaluation.

Demographic Data

Table 3: 'tips for autism' Course Attendance

		2007 Courses (CYF)	2008 Courses (Ed)	2009 Courses (Ed)
Courses valuated		3	13	12
Teams		10	85	74
Role	Parents/caregivers	18	95	86
	School personnel	16	192	192
	Key workers	4[a]	71	82
	Others	8	58	15
Total attendees		**46**	**416**	**375**

[a] For the 2007 Child, Youth and Family courses, these four attendees were social workers.

As Table 3 indicates 28 courses containing 169 teams and 837 participants were evaluated over the three-year period. The largest group was school personnel (400), followed by parents/caregivers (199), key workers (157) and other (81).

Table 4: Children Reached by the 'tips for autism' Courses

		2007 Courses (CYF)	2008 Courses (Ed)	2009 Courses (Ed)
Age range		7-13 years	5-11 years	5-12.5 years
Gender	Male	8	64	67
	Female	2	21	7
Ethnicity	NZ European	8	45	34
	Māori	1	10	7
	NZ European/Māori		1	3
	European		6	9
	Chinese		3	1
	Indian		3	1
	Other	1	8	11
	Missing		9	8
Total Children		**10**	**85**	**74**

The 169 focus children consisted of 139 males and 30 females ranging in age from 5 to 13 years. They represented a multicultural group with "other" being recorded as: Asian (3); American/Scottish (1); Samoan/Niue (1); Vanuatu (1); Cook Island Maori (1); Filipino (1); NZ Russian (1); NZ European/Samoan (1); Maori/Greek/Indian (1); NZ American (1); European Chinese (1); NZ Algerian (1); South African (1); NZ Dutch (1); NZ Samoan (1); European Asian (1); NZ Maori and Welsh (1) and NZ Egyptian (1).

Table 5: Location and Composition of Courses

Region	2007 Courses (CYF)	2008 Courses (Ed)	2009 Courses (Ed)
Northland		43 (7 teams)	
Auckland	10 (3 teams)	104 (19 teams)	88 (19 teams)
Waikato		24 (6 teams)	17 (4 teams)
Bay of Plenty		55 (12 teams)	
Gisborne/Hawkes Bay			39 (8 teams)
Taranaki		35 (6 teams)	43 (8 teams)
Manawatu		14 (3 teams)	
Wellington	19 (3 teams)	39 (8 teams)	42 (8 teams)
Nelson			42 (8 teams)
West Coast		25 (7 teams)	
Canterbury	17 (4 teams)	35 (8 teams)	65 (12 teams)
Otago		42 (9 teams)	
Southland			39 (7 teams)
Total	**46 (10 teams)**	**416 (85 teams)**	**375 (74 teams)**

Table 5 shows the wide geographic spread of the courses evaluated – the largest numbers were in the Auckland region, followed by Wellington and Canterbury.

Table 6: Final Course Feedback and Survey Respondents

		2007		2008		2009	
		Respondents	Return rate (out of 46 attendees)	Respondents	Return rate (out of 416 attendees)	Respondents	Return rate (out of 375 attendees)
Final Course Feedback Form		37	80.4%	285	68.5%	275	73.3%
Pre-course survey	All participants	10[a]	21.7% (100% of Ak attendees)	125	30.0%	294	78.4%
	Family					73	
	Professionals					164	
	Key workers					57	
Post-course survey	All participants	7 Ak, 9 Wgtn/ Chch	34.8%	109	26.2%	128	34.1%
	Family/ Professionals					98	
	Key workers					30	

[a] Auckland only.

Table 6 shows the number of participants who responded to the final course feedback form and the pre- and post-course surveys over the three years. The response rate for the final course feedback forms handed out by the 'tips' facilitators at the end of each course was consistently high (ranging from 68.5% to 80.4%). Unfortunately, the response rate for the pre- and post-course surveys was not as high – sitting around the 30% mark with the exception of the pre-course survey for 2009 which received a 78.4% return rate. This can be attributed to the survey being distributed by facilitators on the first day of the course and participants being given time to complete it before the course started. While the low survey response rate was

disappointing, it was compensated for by the large amount of data collected from other sources (see Part One).

Priority Question One (b) (asked by CYF and the Ministries of Health and Education)

What are the characteristics of content/design, implementation and outcomes that contribute to enhancing the quality of life for people with ASD?

This question was asked of all participants in the pre-course survey (Year Two), and of case study participants in all three years. Their answers show that PL & D programmes can enhance the quality of life of children with ASD by helping course participants to:

- better understand children, their strengths, interests and the impact ASD has on them
- gain knowledge about autism and effective ways of providing for children with ASD
- learn about the services and support available to children and to themselves
- collaborate with other team members to meet the needs of children with ASD in ways that are continuous and consistent across different contexts
- change attitudes to 'person first, autism second' and
- increase confidence and ability to manage, teach and care for children with ASD.

Participants believed that the knowledge and skills they gained would in turn lead to gains for the children they work with and care for. They noted that as a result of their increased ability and the application of specific course content, children with ASD could be assisted to:

- communicate their needs, feelings and aspirations;
- develop their social skills, self-confidence and self-esteem;
- better understand what is happening around them thus reducing their stress and frustration;
- increase their independence, self-management and learn appropriate strategies to improve their quality of life;
- make academic progress;
- develop their social and support networks; and
- be included in society.

Priority Question Two (asked by CYF and the Ministries of Health and Education)

How valuable/high quality is the professional learning and development programmes' content/design and delivery?

In Years One and Two all data sources were searched for examples of the 34 merit criteria relevant to the organization, content, design, delivery and implementation of the 'tips for autism' course. Each year in the post-course survey participants were asked about the strengths and weaknesses of the course and whether or not it had met their expectations. Case study participants were invited to elaborate on these questions during their interviews. Similarly, in Years One and Two, course facilitators were asked about the course's strengths and weaknesses. Lastly, each year final course feedback forms were considered. (See Appendix Eight, Table 7 for the mean responses to questions in this evaluation measure.)

As Table 7 indicates there was a very high degree of participant satisfaction in all areas. Over the three years of the evaluation all data sources confirmed that the 'tips for autism' course was considered a very valuable, high quality programme in respect to its content, design and delivery. A large majority of participants reported that it either met or exceeded their expectations. Areas identified as particular strengths included: multidisciplinary team structure and a focus that facilitated collaborative and interactive partnerships; skilled and credible facilitators; practical, relevant and informative content that was evidence- and research-based; strong design; and its child-focus including the opportunity the course provided to concentrate on the interests, strengths, goals and education support needs of a single child.

Some areas of weakness were also identified. A key weakness was the lack of cultural input in course content and delivery. This is particularly relevant given that 20%, 35% and 31% of the focus children from Years One, Two and Three respectively were from ethnic minority groups. A further factor that adversely affected the programme's effectiveness across all years was the absence of significant team members. A range of barriers to attending the course was described, with time and management of other duties being the key barriers identified.

A number of suggestions for improvement were made with common themes being the inclusion of: more time for inter-group and facilitator discussion and sharing of personal examples; more widespread advertising and clearer initial course information; and

arrangements to accommodate participants' different levels of understanding and experience and children's differing ages and ability levels.

Priority Question Three (asked by CYF and the Ministries of Health and Education)

How substantial and valuable are the gains in participants' knowledge, skills, attitudes, confidence and other competencies as a result of the professional learning and development programme?

In Years One and Two all data sources were searched for examples of the 12/13 merit criteria relevant to knowledge, skills and attitude gain. In all three years survey participants were asked whether they had benefited from the course. Case study participants were asked to elaborate on this question and also asked whether the 'tips' course had contributed to any changes they had made. In Year Three a pre-post course comparison of key workers' team ratings was made. Similarly, each year a comparison was conducted of pre- and post-course survey data relating to participants' reported levels of knowledge, skills, attitudes and other abilities. See Appendix Nine, Table 8 for this comparison data across the three years of the evaluation.

Table 8 shows that gains were made in all areas across all years. In 2008 and 2009 gains in 19/20 and 21/21 areas respectively were statistically significant. The gains in 2007 were not statistically significant which can, in part, be attributed to the low sample number in this year. [11]

In Year Two, the pre- and post-course survey data from professionals and parents/whānau was disaggregated. This showed that while both groups believed they had improved in all areas, professionals' gains were all statistically significant while parent/whānau increases were statistically significant in 12 out of the 20 areas probed. Qualitative comments indicated that participants perceived their most valuable gains were made in: establishing collaborative, interactive relationships; becoming more confident, competent and optimistic about working or living with children with ASD; increasing their ASD related knowledge; and sharing and learning more about the target children from other team members.

---

[11] A small sample size has consequent smaller degrees of freedom and other numerical components in the t-test formula. It should also be noted that in order to maintain consistency over the three years, independent t test results were used in this chart. In the CYF report paired sample testing was reported on. This accounts for differences in the figures given in the two reports

In Year Three, a comparison of professionals' and families' estimations of their pre- and post-course knowledge, skills, attitudes, confidence and abilities indicated a high level of statistically significant increases in all 21 areas probed. Also in Year Three a comparison of key workers' pre- and post-course estimations of their team's skills and interactions showed increases in seven of the eight areas considered. However, case study participants indicated that while the 'tips' course was successful in improving team-related skills and building team rapport and confidence, the realities of people's busy lives after the course often made it difficult to put newly-learnt skills into practice or maximise the benefits of improved team relationships.

While an exclusive causal link between participants' perceived gains and the 'tips for autism' course cannot be made, it is highly likely that the course contributed considerably to the substantial improvements reported across all years. Certainly case study participants in all years attributed their increased knowledge, skills and abilities directly to 'tips' course attendance. Similarly, qualitative comments from survey participants confirmed substantial and valuable gains from the course particularly in areas relating to: team interaction; ASD-specific knowledge and skills; knowledge about the focus child and their home and school life; and personal confidence and support.

Priority Question Four (asked by CYF)

To what extent does the professional learning and development programme help enhance communication, co-ordination and/or collaboration among the people supporting the person with ASD (including family/whānau/carers)? (b) How much value is the follow-up support adding?

Data to answer this question were gathered from all case study participants who were asked about changes in the way their team worked as a result of the 'tips' course – level of involvement, interaction, collaboration and communication were all specifically probed. They were also asked to provide pre- and post-course ratings of their own team-related skills and attitudes.

This information showed that participants believed the 'tips for autism' course had enhanced communication, co-ordination and collaboration among team members by providing opportunities for them to establish networks, share knowledge, be involved in collaborative teamwork, interact socially and contribute as equally valued team members. The paired

24

sample comparison of pre/post-course data showed overall increases in five out of six team-related skills. However, in some teams the absence of important members had a negative impact both on team collaboration and the consequent benefits for the child. Participants considered it essential that all team members attend the course. Ongoing support and collaboration after the course ended was also an area of concern in the CYF evaluation.

Follow-up support consisted principally of the development and use of individual profiles, special interest learning kits, course summaries and the provision of additional post-course information. The purpose of this support was to enhance course work and to assist participants to immediately implement their goals. While all teams received some type of follow-up support, several participants considered the support offered was helpful and added value to the course experience but others were confused about what constituted follow-up support and whether or not they had received any.

Priority Question Four (asked by the Ministry of Education) and Priority Question Six (asked by CYF)

What changes are evident for the person with ASD and their family/whānau/carer(s) that can reasonably be attributed to the project (directly or indirectly)?

In all years pre- and post-course survey data were collected about participants' perceptions of the focus children's abilities. Participants were also asked in post-course surveys and case study interviews about the benefits of the course to these children and families and about any progress and changes they had noted. In Year Three, prior to the 'tips' course, case study participants were asked to state the top three goals they would like their child to achieve. After the course they were asked about the degree to which these goals were achieved and whether the 'tips' course had contributed to progress made.

See Appendix Ten, Table 9 for participants' pre- and post-course assessments of the focus children's abilities. The data in Table 9 shows gains in all areas indicating definite positive shifts in children's ability across the three years. In 2007 the increase in 1/9 areas was statistically significant, in 2008 increases in 7/9 areas were statistically significant and in 2009 increases in 7/8 areas were statistically significant.

In the CYF evaluation, two of the three case study parent/caregivers considered they benefited from attending the 'tips' course and that their focus child had made positive gains as a result of their participation.

In the second year of the evaluation, particular children were described as being calmer, happier, less stressed and more supported and included. Participants reported that focus children had made academic, social and behavioural gains, which they attributed directly to the 'tips for autism' course. Furthermore, case study parents also noted that they coped better and collaborated more because of their "united" teams. Both case study and survey parents reported having a greater understanding of: their focus children; autism and how it affected their children; and the roles, knowledge and intentions of professionals.

Many positive changes and benefits were reported in the third year of the evaluation. For children these included: improved communication; academic progress; a reduction in anxiety and frustration levels; improved behaviour and socialisation skills and greater inclusion into mainstream settings. While some participants believed these changes could be attributed directly or indirectly to the 'tips' course, others noted that a range of other factors could also have contributed to the children's progress. However, parents and family members were more certain about the 'tips' course directly influencing changes for themselves. They specifically mentioned: improved communication with and understanding of their child; using a greater range of intervention strategies; improved collaboration with team members; more consistency between home, school and the professionals that worked with their child; improved parental communication; increased confidence; and greater hope for their child's future.

While acknowledging the impossibility of being able to attribute children's progress solely to the 'tips' course, data across the years consistently indicated that participation in the 'tips' course improved teams' collaborative processes and contributed to improved skills and attitudes of parents/family/whānau/carers and to positive outcomes for the focus children.

Priority Question Five[12] (asked by the Ministry of Education)

How effectively are the participants applying and using their new knowledge, skills, attitudes, confidence and other competencies (i.e., evidence of changed behaviour or [improved] implementation/delivery of a particular task or service)?

In Year Two participants were asked in the post-course survey and in post-course case study interviews whether or not they had utilised activities, information or understandings gained from the course in any way. In addition all data sources were searched for examples of the 10 application of knowledge, skills and attitude merit criteria. In both Years Two and Three, information gained from post-course survey and case study interview questions relating to benefits and changes provided evidence of participants' effectiveness in applying newly learned knowledge, skills, attitudes, confidence and other competencies. Additionally, in Year Three post-course survey and case study interview questions were posed about the use of Plans developed at the course and the effectiveness of strategies included in these Plans.

Data show that in Year Two, both survey and case study participants reported continued use of the knowledge, skills, attitudes, confidence and other competencies gained on the 'tips for autism' course. Effective use of the participants' new knowledge and skills was evidenced in the improvements reported for the focus children and acknowledgement of providing more focused, relevant and child-centred IEPs than they had done prior to the 'tips' course.

In Year Three, participants identified personal and team gains in five major areas: increased understanding; improved teaming; increased collaboration; enhanced learning; and focused planning and goal setting. How effectively these gains were being applied and used was evidenced by positive changes in: team processes and relationships; teaching practices and programmes; and personal skills and attitudes.

Similarly, progress reported for children with ASD, the effectiveness of strategies taught and the successful implementation of plans developed at the 'tips' course provided further evidence of the effective application of new learning. However, some plans were of a dubious quality and findings from the post-course survey and case study interviews also indicated that a range of challenges (e.g., staff changes and children's changing moods) adversely affected

---

[12] Priority Five question for the CYF evaluation was addressed by CYF and the Ministry of Health

the implementation of the plans. Despite the variation in plan quality, the longitudinal data indicate both an improved confidence and competence in the participants' ability to effectively apply the new learning gained on the 'tips' course.

Priority Question Six (asked by the Ministry of Education)

What unexpected outcomes (positive or negative) have resulted from the professional learning and development programme and/or any follow-up support?

In the Year Two, facilitators where asked in their focus group interview whether they were aware of any unexpected outcomes. The nature and need for follow-up support was also discussed in this interview. In Year Three, the post-course survey and case study interview included questions about unexpected outcomes participants believed were attributable to the 'tips' course. Key workers were also asked about the nature, extent and effectiveness of follow-up support.

The data showed that for facilitators, unexpected outcomes from the 'tips' course were (a) the ripple effect of participants sharing what they had learned with their colleagues and (b) positive changes in attitude from certain participants who were initially negative about the course. A possible unexpected outcome for participants is associated with the high level of course satisfaction, with many stating that the course had exceeded their expectations. For the evaluators, an unexpected outcome was that, in general, professionals reported greater increases in the knowledge, skill and competency areas probed than parents.

In Year Three**,** survey respondents and case study participants reported a range of unexpected positive and negative outcomes resulting from the 'tips' course. The positive outcomes outnumbered the negative by approximately four to one. The most common positive outcomes were associated with the amount and nature of new learning. Other unexpected outcomes included: improved relationships; being able to use new knowledge and skills with other children; improved communication; and increased inclusion of the focus child into the regular classroom. Some 'one-off' unexpected negative outcomes were reported. There was no pattern or consistent theme to these outcomes. They included: lowered and unrealistic expectations of the child; a participant being labelled an expert on autism which was unwarranted; misuse of 'tips' strategies by school personnel; overly familiar relationships between team members; and lost opportunities as a result of time spent at the course.

Priority Question Seven (asked by the Ministry of Education, Year Three)

    a. **How effectively was the trade-off managed between the reach and intensity of the professional learning and development programme, given the relevant constraints?**

    b. **How in depth was the professional learning and development programme, how many people were reached, at what intensity and for how long? [13]**

    c. **What evidence is there that the duration and intensity was both feasible and sufficient to achieve meaningful impacts?**

Data to answer priority seven questions were gathered in Year Three in the key workers' post-course survey and in the final case study interviews. Participants were asked to reflect on whether the course had been long and in-depth enough to bring about meaningful outcomes for team members and/or the focus children. They were also asked for evidence to support their opinion and for suggestions about how the course could have greater impact.

Data showed a general agreement that the 'tips' course was long enough to achieve key outcomes for those involved. These were identified as goal achievement for focus children and effective teamwork for adults. Examples were provided in both areas. The majority of people were happy with the length and structure of the course. Heavy workloads and the difficulty of organising teacher release and child-care conspired against a longer course. However, many participants supported some type of follow-up to keep the momentum going and to maximise course benefits.

Similarly, there was general agreement that the content of the course was valuable and in-depth enough for most participants. While it was understood that course participants varied in their prior knowledge and experience and that a "happy medium" was needed in respect to course content, there were calls for differential arrangements that could accommodate differing needs and abilities of participants and focus children and for an increased cultural focus.

---

[13] In consultation with the Ministry of Education it was decided that as the 'tips' annual reports already contained the demographic data required to answer this question it would not be addressed by the evaluators

Priority Question Eight (asked by the Ministry of Education, Year Three)

a. **How 'exportable' are the knowledge, skills, attitudes, confidence and other competencies learned into other settings and contexts?**

b. **How valuable are any impacts generated through the application of these knowledge, skills, attitudes, confidence and other competencies outside the primary intended setting(s)?**

In the key worker survey and case study interviews participants were specifically asked whether they had used the knowledge, skills and strategies gained from the 'tips' course in other ways apart from working/living with the focus child and if so, to comment on their effectiveness. Additionally, the post-course survey for other participants asked a more general question about whether the activities, information or understandings gained from the course had been used in any way.

Case study psychologists, speech language therapists, teachers, teacher-aides, Special Education Needs Coordinators (SENCOs), Resource Teachers: Learning and Behaviour (RTLB) and a Child and Adolescent Mental Health Service (CAMHS) worker all reported using various elements of the 'tips' programme with other children, both with and without ASD; with other teachers, both within their own school and in other schools; and in other contexts. Comments from survey participants confirmed that this situation was wide spread. Parents appeared to have fewer opportunities than professionals for the transference of 'tips' learning but mention was made of applying both general and specific strategies in home settings with other children and family members. For both parents and professionals the application of 'tips' learning outside the primary intended setting was almost invariably reported as being valuable and successful.

Priority Question Nine (asked by the Ministry of Education, Year Three)

To what extent does this professional learning and development programme represent the best possible use of resources to achieve outcomes of the greatest possible value for this particular population of people with ASD and those who support them?

In the key workers' post-course survey and the case study interviews, participants were asked to compare and rate the 'tips' course with other relevant courses they had attended in the last five years in respect to the effective use of time and resources to achieve valuable outcomes for children with ASD, their parents, whānau and professionals who work with and support them.

Answers revealed that all participants considered the 'tips' programme a good use of time and funding. They believed that the resources provided were valuable and retained a high level of usability and function after the course had finished. Participants reported using the knowledge and skills gained not only with the focus child but also with other children and families with whom they worked. Their new learning could be used immediately and, potentially, throughout their lives. Given this, some professionals noted that the 'tips' course was a more effective use of funding than buying teacher aide or behaviour specialist time.

In comparison to other courses participants had attended the 'tips' course fared well. Major benefits cited were its practicality, relevancy, usefulness, sharing of ideas, skilled facilitators, non-threatening, enjoyable atmosphere and the team approach taken. In respect to the latter, team members felt they all had a role to play and were able to see their own contributions towards the key goals set in the child's Plan. They no longer felt they were working for the child 'in isolation' from each other. As this "buy in" was important to actioning and sustaining changes, the importance of having all significant team members attend the 'tips' course was repeatedly emphasised.

PART FOUR

Is 'tips for autism' a good example of an ASD-specific professional learning and development programme?

HOW DID THE 'TIPS FOR AUTISM' PROGRAMME FARE?

The First Yardstick: Participants' Pre-course Views on What Constituted a High Quality Professional Learning and Development Programme

'tips' participants' views of what a good ASD-specific PL & D programme would look like are outlined in Part Two. The summarised findings in Part Three indicate that by and large their experience of the 'tips for autism' programme matched the qualities they identified in Part Two. Certainly, the data across all years shows that the course either met or exceeded their expectations and that participants considered it to be a very valuable, high quality programme in respect to its content, design and delivery. Areas identified as particular strengths were its: team structure and focus; skilled facilitators; practical, relevant and informative content; design; and child-focus including the opportunity it provided to concentrate on the interests, strengths, goals and education support needs of a single child.

The 'tips' evaluation showed that the deeper the learning the wider the ripple or influence and learning transfer. Deep learning occurred when both the PL & D and intervention were seamlessly integrated and this was identified as a crucial contributor to the success of the 'tips' programme. In contrast to the evidence from the BES 2007, where teacher professional learning was examined in-depth but in isolation from the parents, the 'tips' approach necessitated the involvement of the parent. The development of an intervention plan with practical strategies introduced a solution-focused, intervention-based aspect to the PL & D programme. The shared problem solving approach taken in the 'tips' course increased the likelihood of positive outcomes for the child. It showed that where PL & D and interventions are integrated, participants demonstrate depth of understanding. They are able to integrate theory with practice, and apply the intervention through an inquiry learning or problem-based team approach. The learning with, from and about each other in their teams, enabled 'tips' participants to actively apply theory in an authentic context.

Additionally, in the 'tips' programme, participants were given a variety of roles in the implementation of strategies, a plan, an individual education programme (IEP) and home-

school communication, as well as professional-paraprofessional collaborations. As a result of their individual key roles that interlinked, alongside the need to each fulfil their obligation in relation to the goal or plan, the 'tips' model highlighted the importance of individual and group accountability in terms of ensuring the PL & D was actioned and implemented over time.

The Second Yardstick: Merit Criteria

The 'tips' course also fared well when measured against most of the 57 merit criteria identified in the first and second years of the evaluation. The CYF courses received an overall evaluation score of 85% and the Year Two Education courses scored 91%. These percentages translate as "very good" and "excellent" ratings respectively. In Year Three an overall scoring system was not used but the data indicate an equally high standard was achieved.

In identifying merit criteria, four overarching themes emerged. Following are evaluation results specifically related to these themes.

Team Focused

The team focus was identified as a major strength of the programme in each year of the evaluation. The opportunity for the whole team to work together was greatly appreciated. As one case study member in Year Three explained, "without all the people understanding and knowing where they were headed with the goals you come a gutser pretty quickly." This was supported by a parent who noted, "the days cemented us together as a group, in a team."

In respect to the team focused approach, the CYF courses scored 81% (Very Good) and Year Two courses scored 95% (Excellent). In the third year specific benefits attributed to the course included: improved teaming - strong bonds and relationships between members were established and/or strengthened; increased collaboration - ideas and information were shared, communication improved, and regular meetings scheduled; and focused planning and goal setting - teams worked together to share planning, differentiate the curriculum, set shared, realistic goals, and compiled appropriate plans and strategies for both home and school environments.

Needs based

The 'tips' course was based on participants' and the focus children's needs. Through the development of a plan, the child's needs were fore grounded and through the pedagogical

approach adopted in each course, the participants' learning needs were acknowledged. The degree to which both groups' needs were met varied across courses and over the three years. However, generally, courses received a high rating score in this area – 76% (Very Good) for the CYF courses, 89% (Very Good) for Year Two courses. Similarly, in Year Three participants reported having their own needs met and the Plans developed to meet the focus children's needs were considered by key workers to be very effective.

Knowledge based

The 'tips' course was knowledge based both in terms of the programme taught by the facilitators and the knowledge and experience shared by participants. The knowledge-based category was the highest scoring both for the CYF courses (96% - Excellent) and the Year Two courses (97% - Excellent). Participants commented favourably on how well the course was structured in that there was an equally good fit for family, school and professionals, and that the course handbook was very comprehensive.

In the third year, two of the specific benefits attributed to the course were: increased understanding of students' needs, behaviours, capabilities and perspectives and of autism and how it relates to the focus child; and enhanced learning - the importance of visuals, socialisation and group work for children with ASD were reinforced and valuable student profiles were developed for permanent staff and relievers. One parent with no prior understanding of ASD reported that she could now talk the same language as others, that it helped her to learn why and how autism is different for everyone and that it built knowledge of autism as well as skills, strategies and best practice. Similarly, a key worker commented that the course empowered the teacher with new strategies and interventions, "got the dad thinking outside the box and the teacher aide and teacher communicating." These changes in the way people worked were attributed to the content that was provided, and the ready accessibility of valuable resources.

Pedagogically Sound

In the Pedagogically Sound category, the CYF and Year Two courses scored 86% (Very Good) and 84% (Very Good) respectively. An analysis of data across all three years identified key elements of a pedagogically sound programme. These included: providing participants with skills and approaches that can be effectively applied and used in their own context as well as transferred across settings; and acknowledging participants both as recipients of and contributors to new knowledge. The latter involved the utilisation of participants' skills,

experience and expertise within the group. In attending the 'tips' sessions, participants felt that they had some knowledge to contribute and through using this, they were enabled to extend their learning. Having their expertise legitimised enabled them to increase their own levels of understanding rather than starting "from scratch."

The range of expertise amongst the participants also meant that problem solving was relevant to them whether as a learner or as a person with established expertise. It was identified as important in learning and applying a new skill, determining which approach to use in a given context and identifying and using their expertise in a new or novel way.

In conclusion to this section two important points made in Part 1 should be reiterated. Firstly, the evaluation was, in the main, based on self-reported, subjective assessments and opinions. With such subjective measures there can be no certainty about the accuracy of the data gathered. Secondly, the difficulty of proving causation plagued this evaluation. While the 'tips' course will have contributed to the positive outcomes reported for the focus children, it is highly likely that other factors also influenced the gains made. Having said that, it should also be noted that PL & D courses that integrate intervention and professional development as the 'tips' course does, have a greater potential to directly influence student outcomes than PL & D courses where intervention planning and implementation happens after the course.

PART FIVE

How can these findings (especially in relation to Priority Questions seven, eight and nine) be helpful to the Ministries of Education, Health and CYF in future decision-making.

Convincing Evidence

Priority Question One (c) asked, "What evidence would convince decision makers that it was well worth implementing (or would be worth implementing more widely)?"

The CYF manager was asked this question in the evaluation of the CYF courses. He replied that in making any decisions he would look for evidence that the programme had contributed to the "stability of placements for children whose carers had been through the programme." He would also consider whether: participants commented positively on the course; care plans reflected course strategies; there was continuing use of skills learnt on the course; teams were working collaboratively and participants' "relationships with the wider circle of professionals around the child reflected a shared view about how we come to work to enhance this kid."

In relation to the Education courses, no interviews were conducted with decision makers to ascertain what evidence would convince them that the 'tips' programme was worth implementing more widely. However, Davidson's (2005, p. 34) work was drawn on to provide the following recommendations.

The evidence decision makers require would need to show that:

(1) the needs of the participants, focus children and their families/caregivers have been met;

(2) there has been a noticeable positive impact on the participants, the children and their families/caregivers;

(3) the organisation is effective and the content and design of the 'tips' programme is educationally and pastorally sound and matched to the participants', children's and families/caregivers' needs;

(4) the delivery of the programme is in compliance with all legal, ethical and professional standards;

(5) there is a minimum of wastage or inefficiency in the time, money and other resources spent on the 'tips' programme;

(6) the 'tips' programme is substantially more cost-effective than anything else that could feasibly have been delivered with the available resources; and

(7) the 'tips' programme has other attributes that enhance the experience of the participants and ultimately the focus children and their families/caregivers.

Achieving Meaningful Impacts: Implications for Course Length and Design

Priority Question seven queried whether the 'tips for autism' course could achieve widespread and meaningful impacts within given time and budget constraints. The summaries in Part 3 show that in fact the course was considered long and in depth enough to achieve meaningful impacts for both the participants and focus children. However, it could not be determined whether more people would be accommodated if the length and design of the course were altered. [i]

Exportability and Value for Money

Priority Question Eight probed the exportability of the knowledge, skills, attitudes and competencies gained at the 'tips' course. The Part Three summary of this question showed that in all three years the course proved to be highly exportable. Elements of the programme were being used with many different children, teachers and in contexts beyond the primary intended setting. Such widespread use indicates that rather than providing a "cook-book, one-way" approach, the 'tips' course equipped participants to problem solve, adjust and accommodate according to differing needs and circumstances. This inquiry-based approach (supported in the Best Evidence Synthesis) facilitates depth of understanding which in turn leads to generalisation and learning transfer.

Priority Question Nine focused on cost effectiveness and value for money of the 'tips for autism' course. Essentially funders wanted to know whether they were getting 'the biggest bang for their buck.' While a detailed cost analysis was neither required nor produced, the evaluation did show that generally participants believed the 'tips' course to be a good use of time and funding. Certainly, it fared well in comparison to other courses participants had attended or other potential uses of funding discussed. The widespread use of knowledge, skills and competencies reported previously and their potential continued use in the future are factors that illustrate the cost effectiveness and value of the 'tips' course.

Learning from Strengths

The two yardsticks used to measure the quality of the 'tips for autism' course indicate that it is a good example of a high quality, ASD-specific PL & D programme. Consequently, Ministry decision makers would do well to be guided by the identified strengths of this programme. The 'tips' evaluation showed that multidisciplinary, team-based programmes that are practical, child-focused, led by skilful, experienced facilitators and integrate PL & D and intervention are effective, value for money and highly exportable. This recipe for success can be applied to other programmes.

Learning from Weaknesses

Similarly, there are lessons to be learned from the weaknesses identified in the 'tips' programme. Internationally there is a "dearth of studies specifically focussed on promoting professional learning that led to improved outcomes for indigenous peoples" [14] It is not surprising then that the 'tips' programme was also found wanting in the cultural domain. Future PL & D programmes should include more cultural input in course content and delivery. The 'tips' programme attempted to address this weakness with the introduction of pōwhiri, pepeha and whakatauāki[15] however the time-consuming nature of these additions created pressures in an already full programme. It is believed a more useful addition to 'tips' courses would be for facilitators to share an example of meaningful cultural input during the chalk and talk session. This scenario could then serve as a model to guide team members in a directed activity where they consider the focus child's ethnicity, its impact on learning and its implications for understanding ASD and providing a culturally effective and appropriate Plan for the focus child.

A second major weakness of the 'tips' programme was the absence of significant team members.[16] It is suggested that decision makers look at reasons for this absence identified by key workers in the Year Three Report and by the 'tips' Project Leader in her research into this problem.[17] Strategies for overcoming the weaknesses identified can then be introduced. For

---

[14] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration* (BES). Wellington: Ministry of Education, p.230

[15] Official Maori welcome, sayings relating to identification and proverbs respectively.

[16] It should be noted that this is not a weakness of the course's design but of the actual programmes that were evaluated over the three-year period

[17] Mells, K. (2009). *Barriers to participation report*. Draft methodology paper

example, a frequently mentioned reason for non-attendance in the 'tips' evaluation was the financial burden for schools, i.e., they could not afford to release all teachers or teacher-aides involved in working with the focus child. Additional funding to cover teacher and teacher-aide release could be considered. This would be money well spent as the likelihood of initiating changes within a school system is increased by having all school-based team members attend the course.

A variety of minor weaknesses identified in the 'tips' course could also be addressed in future courses. For example, the miscommunication and difficulties associated with setting up the courses across all years could possibly be averted by the introduction of a widespread, informative advertising campaign and a more closely monitored, systematic enrolment process.

A final lesson for decision makers to take on board when contracting longitudinal evaluations is to ensure the evaluation periods do not overlap.

Conclusion

As identified in the *New Zealand Autism Spectrum Disorder Guideline* a range of individuals and groups from across the sector should have access to some form of PL & D relating to children, young people and adults with ASD. The Guideline states that those who "work or live with people with ASD can improve the outcome for those individuals if they have the necessary skills required through appropriate education" (p. 192). For the sake of these individuals, their families and whānau ASD courses should be readily accessible and be of a high quality so that learning and outcomes can be maximised. This three-year evaluation showed that 'tips for autism' is such a high quality course. It is hoped that, with the improvements suggested in this Report, it will continue to be offered well into the future.

PART SIX

APPENDICES

Appendix One: Research Questions Developed by the Ministries of Education, Health and CYFs

Priority One (asked by CYF and the Ministries of Health and Education)

(a) What defines a high quality, valuable, cost-effective professional learning and development programme?

(b) What are the characteristics of content/design, implementation and outcomes that contribute to enhancing the quality of life for people with ASD?

(c) What evidence would convince decision makers that it was well worth implementing (or would be worth implementing more widely)?

Priority Two (asked by CYF and the Ministries of Health and Education)

(a) How valuable/high quality is the professional learning and development programmes content/design and delivery? [Include validity/accuracy, match with participant needs, level-appropriateness, consistency with current evidence (including that in the draft ASD Guideline[18]), innovativeness, consistency with principles for adult learning, fidelity with design, person-centredness, family-centredness, cultural and contextual appropriateness and responsiveness and emphasis on community participation].

Priority Three (asked by CYF and the Ministries of Health and Education)

(a) How substantial and valuable are the gains in participants' knowledge, skills, attitudes, confidence and other competencies as a result of the professional learning and development programme?

---

[18] Ministries of Health and Education. (2008). *New Zealand Autism Spectrum Disorder Guideline*. Wellington, Ministry of Health.

Priority Four (asked by CYF & the Ministry of Health)

(a) To what extent does the professional learning and development programme help enhance communication, co-ordination and/or collaboration among the people supporting the person with ASD (including family/whānau /carers)?

(b) How much value is the follow-up support adding?

Priority Four (asked by the Ministry of Education)

(a) What changes are evident for the person with ASD and their family/whānau/carer(s) that can reasonably be attributed to the project (directly or indirectly)?

Priority Five (to be addressed by CYF and the Ministry of Health)

(a) How cost-effective is the professional learning and development programme in its current form?

(b) Was it worth implementing?

Priority Five (asked by the Ministry of Education)

(a) How effectively are the participants applying and using their new knowledge, skills, attitudes, confidence and other competencies (i.e. evidence of changed behaviour or [improved] implementation/delivery of a particular task or service)?

Priority Six (asked by CYF and the Ministry of Health)

(a) What changes are evident for the person with ASD and their family/whānau/carer(s) that can reasonably be attributed to the project (directly or indirectly)?

Priority Six (asked by the Ministry of Education)

(a) What unexpected outcomes (positive or negative) have resulted from the professional learning and development programme and/or any follow-up support?

Priority Seven (asked by the Ministry of Education, Year 3)

(b)   How effectively was the trade-off managed between the reach and intensity of the professional learning and development programme, given the relevant constraints?

(c)   How in depth was the professional learning and development programme, how many people were reached, at what intensity and for how long?

(d)   What evidence is there that the duration and intensity was both feasible and sufficient to achieve meaningful impacts?

Priority Eight (asked by the Ministry of Education, Year 3)

- How 'exportable' are the knowledge, skills, attitudes, confidence and other competencies learned into other settings and contexts?

- How valuable are any impacts generated through the application of these knowledge, skills, attitudes, confidence and other competencies outside the primary intended setting(s)?

Priority Nine (asked by the Ministry of Education, Year 3)

(a)   To what extent does this professional learning and development programme represent the best possible use of resources to achieve outcomes of the greatest possible value for this particular population of people with ASD and those who support them?

Appendix Two: Evaluation Components

1. Needs Assessment

A major determinant of the effectiveness of any professional development programme is the extent to which it meets the needs of the people for whom it was designed. For the 'tips for autism' programme this refers both to the people attending the course and to the children with ASD with whom they are associated. Pre-course interviews, surveys and observations were used to gain an understanding of participants' and children's perceived needs. The information gained provided baseline data for a pre- post-course data comparison to determine programme effectiveness in meeting these perceived needs.

2. Case Studies

Ten full case studies and one partial case study were conducted. These were located in six North Island and two South Island venues. The 10 full case studies involved 45 people: 11 parents; 19 educators and 15 professionals. The 10 children involved were 8 males and 2 females. They were aged 5 (x2), 6 (x2), 7 (x2), 8, 9, 10 and 13 and were Pakeha (x7), Maori (x2) and Filippino. For the first two years of the evaluation, case study participants were interviewed prior to the start of the course and again six months later. On both these occasions the evaluators also observed the five children involved and interviewed the three children who were verbal. In the third year, in addition to the pre-course interviews, face-to-face follow-up interviews were conducted four months later and telephone or face-to-face interviews were conducted 9 to 11 months after course completion. All five children were observed and interviewed during the case study visits.

3. Quantitative Data Analysis

Because of the late start of the CYF evaluation pre- and post-course surveys were sent to all participants at one venue (the case study participants) while participants at the other two venues received only the post-course survey. In Years Two and Three all participants received both the pre- and post-course survey. These surveys included self-report assessments of participants' understanding, knowledge and attitudes and participants' subjective assessment of children's abilities. Specifically, the data collected were to ascertain the degree to which participants experienced and made meaning of the 'tips for autism' programme. There was no intention to objectively "measure" the degree of learning that took place.

The data gathered were analysed using the Statistical Package for Social Science (SPSS) computer software. Frequency, percentage and mean score information was generated for all quantitative survey questions. Additionally, paired sample (dependent) and independent t-tests with two-tailed tests of significance were used to examine differences in responses between pre- and post-course surveys and between different groups of respondents. Pearson's chi-square tests to determine significance were done for the 'tips for autism' final course feedback information and in Years One and Two, cross tabulations by region were run to investigate any potential regional differences.

4. 'tips for autism' Programme Information and Documentation

In order to gain an understanding of the 'tips for autism' programme, the five evaluators attended four different tips courses; facilitators from these courses and the 'tips' Project Leader were interviewed; and a focus group interview was conducted involving all facilitators who attended their 2008 annual meeting. Additionally, the Project Leader made available a wide range of programme information and documentation. This included: the course workbook; forms and information pertaining to the establishment and administration of courses; information concerning the training of facilitators; background information regarding the history and development of the 'tips for autism' programme; final course feedback questionnaires for Years One, Two and Three; daily session feedback forms for Years One and Two; Individual Year Three Plans; Project Leader's Annual Reports to the facilitators; Project Leader's Milestones Reports to the Ministry of Education; demographic data relating to courses in the three year evaluation period; a Report on the CYF programme written for the Working Group for the ASD Workforce Development Project; and Reports (2009) relating to barriers to participation and cultural considerations.

5. Literature Review

A review of relevant literature guided and complemented the evaluation. The literature review was conducted in the first year of the evaluation and some additional material was added in Year Two (See Appendix Seven). However, it should be noted that the literature review was considered a subsidiary component of the evaluation. It was never intended to be a comprehensive analysis of relevant literature. Rather its main purpose was to assist in answering Priority Question One by contributing information to identify merit criteria.

Appendix Three: Data-Gathering Methods

(a) Written surveys/questionnaires: pre- and post-course surveys, final course feedback questionnaire and daily session feedback forms

(b) Face-to-face interviews with case study participants, children, 'tips' Project Leader, selected facilitators, CYF training organiser, CYF Manager; focus group interview with facilitators and 'tips' Project Leader; telephone interviews with Year Three case study participants – second and third follow-up.

(c) Observations: children and course sessions.

(d) Documentary analysis: 'tips for autism' programme information and documentation outlined above; children's work samples, art activities, school reports and IEPs.

(e) Advisory Group and expert consultation: Feedback on reports was provided by an independent academic and the Advisory Group. The latter consisted of six members representing the following areas of experience and expertise: parents (2),'tips for autism' facilitators (2), speech and language therapist (1) RTLB (1) teachers (1), respite care worker (1) Altogether Autism worker (1) and former course participants (2).[19]

---

[19] Some Advisory members represented more than one area of expertise.

Appendix Four: Davidson's Key Evaluation Checklist

Exhibit 1.2   The Key Evaluation Checklist (modified from Scriven's 2003 version)

Preliminaries	**I. Executive Summary** One- to two-page overview of the evaluand and findings	**II. Preface** Who asked for this evaluation and why? What are the main evaluation questions? Who are the main audiences?	**III. Methodology** What is the overall design of the evaluation (e.g., quasi-experimental, participatory, goal free) and (briefly) why?	
Foundations	**1. Background and Context** Why did this program or product come into existence in the first place?	**2. Descriptions and Definitions** Describe the evaluand in enough detail so that virtually anyone can understand what it is and what it does.	**3. Consumers** Who are the actual or potential recipients or impactees of the program (e.g., demographics)?	**4. Resources** What resources are (or were) available to create, maintain, and help the program or policy succeed?	**5. Values** On what basis will you determine whether the evaluand is of high quality, valuable, and so forth? Where will you get the criteria, and how will you determine "how good is good"?
Sub-Evaluations	**6. Process Evaluation** How good, valuable, or efficient is the evaluand's content (design) and implementation (delivery)?	**7. Outcome Evaluation** How good or valuable are the impacts (intended and unintended) on immediate recipients and other impactees?	**8 & 9. Comparative Cost-Effectiveness** How costly is this evaluand to consumers, funders, staff, and the like, compared with alternative uses of the available resources that might feasibly have achieved outcomes of similar or greater value? Are the costs excessive, quite high, just acceptable, or very reasonable?	**10. Exportability** What elements of the evaluand (e.g., innovative design or approach) might make it potentially valuable or a significant contribution or advance in another setting?

6

11. Overall Significance
Draw on all of the information in Checkpoints 6 through 10 to answer the main evaluation questions (e.g., What are the main areas where the evaluand is doing well, and where is it lacking? Is this the most cost-effective use of the available resources to address the identified needs without excessive adverse impact?).

Conclusions

12. Recommendations and Explanations
[optional]
A more in-depth analysis of why/how things went right/wrong, perhaps including recommendations for improvement

13. Responsibilities
[optional]
A more in-depth analysis of exactly who or what was responsible for good or bad results (Note: This is very tricky and is usually not the kind of territory you want to get into unless you are highly skilled.)

14. Reporting and Follow-up
Who will receive copies of the evaluation report and in what form (e.g., written, oral, detailed versions, executive summary)?

15. Meta-evaluation
A critical assessment of the strengths and weaknesses of the evaluation itself (e.g., How well were all of the Key Evaluation Checklist checkpoints covered?) and conclusions about its overall utility, accuracy or validity, feasibility, and propriety (see the Program Evaluation Standards for details)

SOURCE: Adapted and reprinted by permission by Michael Scriven.

7

Appendix Five: Merit Criteria: Process and Outcomes

	MERIT CRITERIA: PROCESS			
	Team Focused	**Needs-Based**	**Knowledge-Based**	**Pedagogically Sound**
Organisation, Content and Design *The course…*	1. includes all significant team members 2. provides opportunities to establish support networks 3. promotes social climate and interaction amongst participants	7. targets appropriate consumers 8. is age appropriate 9. is appropriate to the child's level of ability 10. is appropriate to the child's culture 11. is timely	15. is at an appropriate level for the participants 16. is evidence-based and research-based 17. provides new learning 18. provides knowledge of a variety of effective methods and strategies 19. provides practical application of theory 20. focuses on ASD-related knowledge, attributes and issues	22. is context specific and relevant 23. emphasises a problem-solving approach 24. uses accessible language & good quality teaching resources 25. incorporates the principles of adult learning 26. provides opportunities to experience and understand a child's perspective 27. is generalisable 28. is innovative 29. is accessible

	MERIT CRITERIA: PROCESS			
	Team Focused	**Needs-Based**	**Knowledge-Based**	**Pedagogically Sound**
Delivery and implementation *The course …*	4. facilitates sharing of aspirations, skills, knowledge and understanding 5. facilitates collaborative team work 6. equally values all team members' contributions	12. focuses on child's needs 13. focuses on family's needs 14. focuses on professional's needs	21. focuses on learning about (a) the child including their strengths and interests (b) in different environments	30. is culturally appropriate and responsive 31. incorporates a variety of teaching approaches 32. has skilled facilitators (i.e. knowledgeable, enthusiastic, flexible, adaptable, positive, available & use accessible language) 33. has fidelity with design 34. allows sufficient quality time to cover and reflect on course content

MERIT CRITERIA: OUTCOMES

	MERIT CRITERIA: OUTCOMES			
	Team Focused	**Needs-Based**	**Knowledge-Based**	**Pedagogically Sound**
Knowledge, skills and attitude gain *As a result of the course participants …*	1. shared knowledge 2. established collaborative, interactive relationships	Gained knowledge, skills and attitudes: 4. appropriate to age and level of the child 5. to meet the child's needs 6. to meet family's needs 7. to meet professionals' needs	11. increased knowledge of the child including their strengths and interests 12. gained knowledge of effective methods and strategies 13. increased their ASD-related knowledge 14. increased self-awareness and self-reflection	16. increased their cultural awareness and responsiveness 17. engaged with the material, facilitators and each other 18. became more confident, competent and optimistic about working/living with children with ASD

	MERIT CRITERIA: OUTCOMES			
	Team Focused	**Needs-Based**	**Knowledge-Based**	**Pedagogically Sound**
Application of knowledge, skills and attitude (Sustainability) *As a result of the course participants …*	3. experience on-going support and collaboration	Apply knowledge, skills and attitudes to meet the needs of: 8. the child 9. the family 10. professionals	15. apply knowledge, skills and attitudes when working with other children and in other contexts	19. use a child-centred approach 20. take context and community into consideration 21. use a range of different approaches and strategies 22. use a problem solving approach 23. apply knowledge, skills and attitudes across settings

Appendix Six: Rubrics for Determining Relative Merit and Overall Merit

Rubric for Determining Relative Merit

Score	Description
0	No evidence found
1	Some evidence, criteria met for some participants not others, one or more areas of considerable concern
2	Reasonable evidence, criteria met for many participants, one or more areas of minor concern
3	Strong evidence, criteria met for most participants, minimal concerns

Rubric for Determining Overall Merit

Score by %	Rating	Explanation
91-100	Excellent	Clear example of exemplary performance
71-90	Very Good	Very good performance on virtually all aspects, minimal weaknesses
31-70	Good	Reasonably good performance overall, some weaknesses
11-30	Barely Adequate	Fair performance, some serious weaknesses
0-10	Poor	Unsatisfactory performance, serious weaknesses across the board

Appendix Seven: Literature Review

<u>Introduction</u>

Ascertaining a clear picture of current opinion and research evidence relating to effective professional learning and development programmes in general, and ASD professional development in particular, first requires a sound evidence base on which to define a quality professional learning and development programme for children with autism. By searching in closely related fields this review of the literature informed the evaluation of the 'tips for autism' Extended professional learning and development programme.

As indicated in the Evaluation Plan, this is not an extensive literature review, which would be beyond the scope and budget of the current project. However, the literature review did inform and complement the evaluation of the CYF courses. The focus of the literature review is to answer Priority Question One:

(a)   What defines a high quality, valuable, cost-effective professional learning and development programme?

(b)   What are the characteristics of content/design, implementation and outcomes that contribute to enhancing the quality of life for people with ASD?

(c)   What evidence would convince decision makers that it was well worth implementing (or would be worth implementing more widely)?

Literature on ASD professional learning and development programmes provides a descriptive overview of the breadth of literature in this area. While informing the selection of values, the literature review ostensibly sits alongside the evaluation of the 'tips for autism' programme. As there is no heading in Davidson's framework that comfortably accommodates the literature review, it has been presented as a section on its own.

<u>Data sources and search strategies</u>

All references were assembled through computer searches of key journal articles and books written since 2000. Earlier examples of literature were selected if they were particularly significant or were seminal studies on this subject. These selected references were included because they provide background or overview information; they are significant works; or because they are themselves guides to related literature or projects that may lead interested parties to further sources of information.

The searches included material from various disciplines, notably education, psychology, social work, sociology, and medicine, as well as from governmental and non-governmental reports. Both published and unpublished material relating to professional development programmes is reviewed. Empirical evidence-based research, systematic reviews, meta-analysis and other relevant articles in peer-reviewed journals were sought using search engines and databases. The websites of New Zealand and international research and professional associations were searched for relevant research, articles and conference proceedings. Other information sources consulted include journal indexes, doctoral theses and experts in the field. In particular, the *Professional Learning and Development: Best Evidence Synthesis Iteration* (BES) (Timperley, Wilson, Barrar, & Fung, 2007) findings were analysed in relation to this 'tips for autism' evaluation. The BES brings together current research on the characteristics of effective professional learning and development in schools. Identifying such areas as leadership, assessment, and professional learning communities, the BES examines these in relation to professional development and teaching. This information informed the present evaluation of the 'tips for autism' programme.

The search engine Educational Resource Information Clearinghouse (ERIC) was used to gather the initial articles for this literature review. Searches were conducted on the terms (1) 'autism'; (2) 'professional development'; (3) 'adult learner', (4) 'child-centred'; (5) 'home setting'; (6) 'community setting'; and (7) 'education setting', yielding 415 results. A further search for 'autism' and 'intervention' was also performed, but as this search yielded 930 results, it was limited to the years 2000-2007 and to the additional term 'program', resulting in a more manageable 165 articles. The results were then scanned for relevant articles.

The New Zealand and Australian government websites were searched for research reports, along with the websites of a variety of New Zealand-based autism associations. Equivalent websites in other countries have not yet been searched. Other electronic resource search engines, such as Google Scholar, Index NZ, PsychInfo, Te Puna and British Education Research, have yet to be searched.

Articles were chosen for inclusion in this review on the basis of their relevance to autism and professional development or community-based programmes or interventions, and, for reasons of expediency, their availability in electronic form via the Internet. Peer-reviewed articles

from reputable journals were given precedence. To date, 50 articles and reports have been reviewed and the results of the 23 most relevant included in this report.[20]

A template for the analysis of information gathered was developed to focus the literature review and ensure consistency amongst evaluation team members. This template included relevancy and quality criteria for the inclusion and exclusion of material; methodological information; source; perspective; theoretical/pedagogical underpinning and weighting criteria.

<u>What is Autism?</u>

To place the literature review in context, it is appropriate to first provide a brief description of autism.

Autism is a severe neurodevelopmental disorder, characterised by a "triad of impairments" involving delay and deviance in social and communication development, along with limited interests and repetitive, restricted, and stereotyped patterns of behaviour (American Psychological Association, 2000; Prior & Roberts, 2006; Siklos & Kerns, 2007; Stahmer, Collings, & Palinkas, 2006). A baffling disorder, with the cause as yet unknown, autism affects all areas of development (Prior & Roberts, 2006; Stahmer et al., 2006). While people with autism share social and communication difficulties, their severity and level of functioning varies. Therefore the term *Autism Spectrum Disorders* is used to describe the range of diagnostic labels on the spectrum, from High Functioning Autism, Asperger Syndrome, to Autism and Pervasive Developmental Disorder (Prior & Roberts, 2006).

The literature uses the label *Autism Spectrum Disorders* (ASD) interchangeably with the terms *Autism* and *Pervasive Developmental Disorder* (PDD), which is the classification used in the American Psychological Association's (2000) diagnostic and statistical manual (DSM-IV-TR). For this reason those three terms will also be used synonymously in the present review of the literature on professional learning and development programmes related to this topic.

---

[20] This is the first stage of a three-year evaluation contract and the intention is to progressively add to the literature review throughout the duration of the project.

Intervention Programmes

There is a consensus in the literature that the prevalence of autistic spectrum disorders is increasing (Boulware, Schwartz, & Sandall, 2006; Stahmer, 2007). Growing numbers of children being diagnosed with ASD have also increased the need for quality early intervention (Boulware et al., 2006). Therefore it is appropriate to include an overview of criteria for effective intervention programmes for children with autism. This will provide a focus for what professional development programmes should address in order to be effective for people who work and live with children with ASD.

A meta analysis of Australian literature (Prior & Roberts, 2006; Roberts & Prior, 2006) indicates that effective intervention programmes for young children tend to contain the same key components, regardless of their different philosophical orientations. Effective programmes:

- Provide an autism specific curriculum content focusing on attention, compliance, imitation, language, and social skills;
- Address children's need for highly supportive teaching environments;
- Include specific strategies to promote generalisation of new skills;
- Address children's need for predictability and routine;
- Adopt a functional communication approach in addressing challenging behaviours;
- Support children in their educational transitions; and
- Ensure that family members are supported and engaged in collaborative partnership with professionals involved in the delivery of treatments.

Components of an EI programme for children with autism that was evaluated by Boulware, Schwartz, Sandall, and McBride (2006) included:

1. A high quality, inclusive early childhood programme;
2. Extended instructional time;
3. Increased technical and social support for families;
4. Coordination of family-negotiated services; and
5. Systematic transition planning.

The New Jersey Department of Education detail seven components to consider when developing quality indicators for evaluating a programme for a student with autism:

1. programme characteristics
2. personnel
3. curriculum
4. methods
5. family involvement and support
6. community collaboration
7. programme evaluation

The literature indicates that effective intervention programmes for children with autism share common components that go across all programmes. However, a consistent finding in research studies is that different children with autism respond in different ways to any given treatment or intervention programme. As stated in the New Jersey Department of Education manual, "Students with autism often exhibit inconsistent development across and within skills. Given these characteristic inconsistencies in performance and the pervasive nature of these disorders, education personnel can encounter significant difficulties when teaching students with autism" (2004, p. 16). There is no single programme that will suit all children with autism and their families. There is, however, evidence to suggest that there are substantial short and long term benefits from early, intensive, family-based treatment programmes, whatever their theoretical basis, as long as these are appropriately adapted to the children's pattern of strengths and weaknesses and take account of family circumstances (Prior & Roberts, 2006; Roberts & Prior, 2006).

Professional Development Programmes

While the literature offers many examples of intervention programmes found to address the needs of children with autism, there is a dearth of literature describing the characteristics of professional learning and development programmes about autism.

It is suggested that the criteria for effective professional learning and development programmes with respect to autism might be similar to those for effective autism intervention programmes.

As stated earlier, the literature review questions directly reflected various priority evaluation questions, but in particular, Priority One and Priority Eight inform this literature review. The synthesis of literature is presented under the following three headings:

(1) What are the characteristics of a high quality, valuable, cost-effective, successful professional learning and development programme in general, of ASD professional development in particular and of programmes similar to the 'tips for autism' course?

<u>Content</u>

Content is one of the most important aspects of professional learning programmes and initiatives, for as Timperley et al. (2007) explain in relation to teacher professional learning, "Without content on which to base deeper understandings and extend teaching skills there is no foundation for change" (p. xxxi). Garet, Porter, Desimone, Birman, and Yoon (2001) also highlight the importance and effect of appropriate content in professional learning. They report that professional learning programmes that have a focus on content knowledge have a significant positive effect on teachers' self-reported increases in knowledge and skills and changes in classroom practice.

In their extensive review of the literature around *general teacher* professional learning, Timperley et al. (2007) found that key features of the content of successful professional learning programmes (those where programmes had a positive effect on student outcomes) were an integration of theory and practice; an integration of specific pedagogical content knowledge and assessment information and a focus on the links between teaching and learning and the relationships between teacher and student. They also found that there were substantive positive outcomes for students where professional learning programmes made specific reference to teachers developing their understanding of and use of assessment. In these programmes, assessment was never an isolated component of professional development.

Other reviewed studies relating to the professional learning needs of teachers report similar findings, particularly in relation to the necessity of linking theory to practice (e.g., Jones, West, & Stevens, 2006; Garet, Porter, Desimone, Birman, & Yoon, 2001). Jones et al. (2006) and Helps, Newsom-Davis, and Callis (1999) also report that teachers, when asked to describe examples of effective professional development, identified professional learning that provided them with opportunities to learn from others. Other factors reported by teachers as

important were being given opportunities to reflect upon what they have learnt in action (Jones et al., 2006).

In relation to the content of professional learning programmes and *ASD*, the literature reveals some core features. Many of these are common to features of general professional learning programmes and some are specific. As with general professional learning programmes, the link between theory and practice is important (Jones et al., 2006; Ministries of Health & Education, 2006) as are learning programmes that provide practical help (Helps et al., 1999). Also reported is the requirement for content to affect the attitudes of participants (Simpson, de Boer-Ott, Smith, & Myles, 2003, cited in Ministries of Health & Education, 2006, p. 121) as attitudes are key determinants of educational success for disabled students. Also reported is that training programmes should not focus on only one approach (Scheuermann, Webber, Boutot, & Goodwin, 2003). As with literature around professional development in general, information around assessment, and specifically functional assessment is seen as a critical component of any professional learning programme for parents, carers, school staff and specialists working with children and young people with ASD (Ministries of Health & Education, 2006).

Some of the literature reviewed made recommendations for the specific content of professional learning programmes for teachers and other professionals working with children with ASD. They maintained that these programmes should include:

- teaching language and communication
- strategies that are specific to ASD
- adaptive behaviours and transitions (McConkey & Bhlirgri 2003; Medhurst & Beresford, 2007; National Research Council, 2001 cited in Ministries of Health & Education, 2006; Scheuermann et al., 2003 cited in Ministries of Health & Education, 2006;).
- knowledge of ASD
- teaching social competencies and skills
- parent involvement (family views and values) (McConkey & Bhlirgri, 2003; National Research Council, 2001; Scheuermann et al., both cited in Ministries of Health & Education, 2006).

For teachers only:

- the theoretical underpinning of instructional approaches
- curriculum development
- trial teaching
- the voice of any consumers
- structure of the classroom

(National Research Council, 2001; Scheuermann et al., 2003, both cited in Ministries of Health & Education, 2006.)

In addition, the Ministries of Health and Education (2006) point out that teacher aides or education support workers (ESW) (paraprofessionals) require professional development for working with each particular child. They need to understand:

- the individual child's characteristics;
- the individual child's communication skills;
- behaviour-management techniques;
- instructional methods; and
- arrangement of the educational environment (p. 121).

Finally, in relation to content, participants in professional learning programmes around children with ASD need to be given education around more than one approach (Ministry of Health, 2006; Scheuermann, Webber, Boutot, & Goodwin, 2003). As pointed out, "An open mind that 'one approach does not fit all' will help teaching methods to be based on the child's actual needs" (Ministries of Health & Education, 2006, p. 121).

Implementation and Delivery

In their review of the literature around *teacher* professional learning, Timperley et al. (2007), found that key features of the context of successful professional learning programmes (those where programmes that had a positive effect on student outcomes) were programmes where prevailing discourses were challenged; where participants had opportunities to participate in a professional community; where there was a consistency with wider trends in policy and research; and where leaders provided active school leadership. Similarly, Garet et al. (2001), when reporting on aspects of teacher professional learning that appeared to support change in teaching practice, highlighted the need for the professional learning to be linked to teachers' other experiences, aligned with other reform efforts and encouraging of professional

communication amongst participants. They also found that opportunities for active learning led to enhanced knowledge and skills of participants (ibid).

The timeliness of professional learning programmes was identified in the research as being important for positive outcomes. In relation to professional learning for those supporting individuals with ASD, The National Research Council (2001, cited in Ministries of Health & Education, 2006) point out that teachers require professional learning in the first four to six weeks of a child placement as well as on-going mentoring in the first year. The National Research Council also report that parents require access to professional learning as soon as difficulties are identified. Scheuermann et al. (2003) also believe timeliness is critical, but point out that often training occurs in response to a problem. They support a proactive approach where professionals engage in professional development before they are required to work with students with autism.

The 'time of the day' has been identified as important when it comes to professional learning. The Ministries of Health and Education (2006), as part of their comprehensive consultation process around the development of the ASD Guideline, found that most participants in professional learning programmes thought that any training needed to occur in "quality time, not twilight time." The recommendation was that professionals should be released from their normal duties in order to: participate in the learning programme; practice new skills; engage in practical problem solving; and communicate with other team members (Ministries of Health & Education, 2006). It is also reported that professional learning and development for teachers is likely to be of a higher quality if it is both sustained over a period of time, and also involves a substantial number of hours (Garet et al., 2001; Scheuermann et al., 2003).

Other key findings in relation to implementation and delivery of professional development programmes are that it is helpful if the team approach is reflected in the style of the professional development and that different professions are given the opportunity to share learning opportunities (Bevan-Brown et al., 2005; National Research Council, 2001, as cited in Ministries of Health & Education, 2006; Scheuermann et al., 2003).

In relation to the facilitators of professional learning, having an understanding of adult learning constructs appears to be important (Ministries of Health & Education, 2006). Similarly, the ability to share their practical experiences is seen as important by teachers and professionals who participate in professional learning experiences (Jones, West, & Stevens,

2006). The Ministries of Health and Education (2006) report that facilitators may require extra education in scaffolding adult learning, developing effective teams, facilitating peer-review, supervision and mentoring, and facilitation of professional networks. They also need skills in evaluating programmes and translating research into practice (National Research Council, 2001, as cited in Ministries of Health & Education, 2006).

(2) What characteristics of a professional learning and development programme's design, content, implementation and outcomes contribute to enhancing quality of life for people with ASD?

There is some evidence to suggest that including the voice of parents is critical to a programme's success (Stoner, Bock, Thompson, Angell, Heyl, & Crowley, 2005). The study by Stoner and colleagues also identified the importance of gaining skills and knowledge about helpful 'tips for autism' and strategies. The participants reported the most useful strategies to be those that were systematic and environmental. In Medhurst and Beresford's (2007) study, visual structure and behaviour management strategies, in particular, were viewed as highly effective interventions.

Stahmer's (2007) study examined the reported use of common elements of effective interventions in early childhood settings. The context of community care examined in this study had many of the basic structural elements needed for effective care of children with ASD and has important messages for developing effective professional learning and development programmes that enhance quality of life for people with ASD.

Although their research focused on Parent Training and Parent Education programmes, the study by Brookman-Frazee, Stahmer, Baker-Ericzen, and Tsai (2006) has implications for all professional learning and development programmes. Brookman-Frazee and colleagues report the need to bridge the gap between evidence-based treatments and community services. In their view, research examining key areas such as the research methodology employed, the procedures used to teach parents, and the focus of the skills taught can facilitate enhancing the content of parent training/parent education programmes. It is likely that this finding also has relevance to professional learning and development programmes.

(3) How can the lessons learnt in professional learning and development programmes be sustained, generalised and widely applied?

Studies indicate that when theory is valued and skills are embedded over time, participants are more likely to become more confident and able to generate their own solutions in the future (Medhurst & Beresford, 2007). The study by Medhurst and Beresford (2007) reviewed the extent to which training skills had been embedded in the long-term. In their evaluation of an ASD professional learning and development programme, they found the training was still as effective a year on.

Many ASD professional learning and development programmes appear to focus on young children with autism. While the importance of early intervention is clear, as the number of children diagnosed with ASD increases, future professional development and learning programmes might consider developing programmes for older children as their needs may differ from those of younger children, as may the needs of their parents and key workers (Brookman-Frazee, Stahmer, Baker-Ericzen, & Tsai, 2006).

A Turkish study (Yucel & Carkaytar, 2007) evaluated the effectiveness of a parent education programme offered through distance education. Results of this study raise possibilities of providing successful cost-effective programmes through information computer technology.

Tsao and Odem's (2006) study illustrated the problematic issue of the generalisation of social skills for young children with autism. It is possible that professional learning and development programmes suffer from similar generalisation issues. However, Lerman, Vorndran, Addison, and Kuhn (2004) study suggest otherwise. They evaluated a training model for teachers of children with autism in the areas of (a) preference assessment, (b) direct teaching, and (c) incidental teaching. The three main purposes of the study were to evaluate whether teachers:

1.   could learn multiple strategies in a limited amount of time;

2.   would acquire certain skills more quickly than other skills; and

3.   would show a preference for using certain promoting strategies over other strategies when they were free to select among several different strategies (p. 511).

The authors believe that, "Brief, didactic instruction is sufficient for teachers to acquire and generalise the skills necessary to conduct stimulus preference assessments with a high degree of accuracy" (p. 522). Whether these findings can be generalised to other professional learning and development programmes is uncertain. Further research is needed in this area.

There are indications that social learning programmes might be the most effective means of ensuring that learning is sustained, generalised and widely applied. For example, in the case of conduct disorders, television programmes such as *Super Nanny* have proved to be a most effective way of providing effective learning (Fergusson, 2008). While "reality television" would not appear to be appropriate for professional learning and development programmes, research into what makes these TV programmes effective and whether these elements can be incorporated into professional development programmes may provide important findings that will contribute to their sustainability, generalisation and wider applicability.

Historically the evaluation of learning and development programmes has been poor – not just in New Zealand, but around the world (Fergusson, 2008). Based on findings related to the development and evaluation of the early intervention programme *Early Start*, Fergusson warns that to ensure the gradual and steady growth of any learning and development programme, evaluative research requires adequate piloting and testing, with quality control procedures firmly in place, e.g., randomised, controlled trials. According to Fergusson there is a growing recognition that effective learning and development programmes are achieved through employment of a prevention science paradigm.

Conclusion

This short review is the first stage of an on-going three-year examination of the research evidence relating to effective professional learning and development programmes in general, and ASD professional development in particular.

Particularly focused upon in this review are important factors associated with the content of professional learning programmes, the implementation and delivery of professional learning programmes and the timeliness of such programmes.

Also reviewed were some studies evaluating direct interventions with children and young people with Autism. There are clear links between these successful interventions and the training and professional learning needs of parents and professionals who work with these programmes. Subsequent Education Reports will build on and extend this evolving literature review.

Reference List

American Psychological Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Bevan-Brown, J., Bevan-Brown, W., Carroll-Lind, J., Kearney, A., Edwards, T., & Hayes, D. (2005). High and Complex Needs Unit Enhanced Training Programme for interagency teams involved with families, whanau and young children who have severe and challenging behaviours. Final Evaluation Report. Palmerston North: Massey University.

Boulware, G-L., Schwartz, I. S., Sandall, S. R., & McBride, B. J. (2006). Project DATA for toddlers: An inclusive approach to very young children with autism spectrum disorder, *Topics in Early Childhood Special Education, PRO-ED,* 94-105.

Brookman-Frazee, L., Stahmer, A., Baker-Ericzen, M. J., & Tsai, K. (2006). Parenting interventions for children with autism spectrum and disruptive behaviour disorders: Opportunities for cross-fertilization. *Clinical Child and Family Psychology Review, 9*(3/4), 181-200.

Fergusson, D. M. (2008). The Christchurch health and development study – some key findings. Presentation for the *Ministry of Youth Development Seminar Series*, 28 March, Wellington: Ministry of Social Development.

Garet, M., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38*(4), 915-945.

Helps, S., Newsom, I., & Callis, M. (1999). Autism. The teacher's view. *Autism, 3*(3), 287-298.

Jones, P., West, E., & Stevens, D. (2006). Nurturing moments of transformation in teachers' comparative perspectives on the challenges of professional development. *British Journal of Special Education, 33*(2), 82-90.

Lerman, D. C., Vorndran, C. M., Addison, L., & Kuhn, S. C. (2004). Preparing teachers in evidence-based practices for young children with autism. *School Psychology Review, 33*(4), 510-526.

McConkey, R., & Bhlirgri, S. (2003). Children with Autism attending preschool facilities: the experiences and perceptions of staff. *Early Child Development and Care, 173*(4), 445-452.

Ministries of Health & Education. (2006). Draft evidence-based guideline for Autism Spectrum Disorder. Wellington: Ministry of Health.

Medhurst, B., & Beresford, J. (2007). 'THOMAS' Training: An early years intervention for children with an autistic spectrum disorder (ASD). *Educational Psychology in Practice. 23*(1), 1-17.

New Jersey Department of Education (2004). *Autism Program Quality Indicators*. A self-review and quality improvement guide for programs serving young students with autism spectrum disorders. New Jersey Department of Education, Office of Special Education Programs, Trenton, NJ.

Prior, M., & Roberts, J. (2006). *Early intervention for children with autism spectrum disorders: Guidelines for best practice* (pp. 1-12). Australia: Australian Government Department of Health and Ageing.

Roberts, J. M. A., & Prior, M. (2006). *A review of the research to identify the most effective models of practice in early intervention of children with autism spectrum disorders*. Australia: Australian Government Department of Health and Ageing. Available from: www.health.gov.au

Scheuermann, B., Webber, J., Boutot, A., & Goodwin, M. (2003). Problems with personnel preparation in autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities,* 18(3), 197-207.

Siklos, S., & Kerns, K. A. (2007). Assessing the diagnostic experiences of a small sample of children with autism spectrum disorders, *Research in Developmental Disabilities,* 9-22.

Stahmer, A. C. (2007). The basic structure of community early intervention programs for children with Autism: Provider descriptions. *Journal of Autism and Developmental Disorders,* 37, 1344-1354.

Stahmer, A. C., Collings, N. M., & Palinkas, L. A. (2006). Early intervention practices for children with autism: descriptions from community providers. *Focus on Autism and other Developmental Disabilities, 20*(2), 66-79.

Stoner, J. B., Bock, S. J., Thompson, J. R., Angell, M. E., Heyl, B. S., & Crowley, P. (2005). Welcome to our world: Parent perceptions of interactions between parents of young children with ASD and education professionals. *Focus on Autism and other Developmental Disabilities, 20*(1), 39-51.

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration* (BES). Wellington: Ministry of Education.

Tsao, L-L., & Odom, S. L. (2006). Sibling-mediated social interaction intervention for young children with autism. *Topics in Early Childhood Special Education, 26*(2), 106-123.

Yucel, G., & Carkaytar, A. (2007). The effectiveness of a parent education programme offered through distance education about Independent Autistic Children Education Centre (IACEC). *Turkish Online Journal of Distance Education-TOJDE, 8*(1), 23-32.

2008 ADDENDUM TO THE LITERATURE REVIEW

Priority Question One (a): What defines a high quality, valuable, cost-effective professional learning and development programme?

What did the literature say?

The literature on effective pedagogy for learners with ASD suggests that there is no need for a specialized pedagogy for this group (Humphrey & Lewis, 2008; Norwich & Lewis, 2005), or for disabled students generally (Ainscow, 2007). Characteristics of a high quality professional learning and development programme therefore, involve supporting teachers, educators, and families to use similar and consistent frames of reference when discussing learning, teaching and pedagogy, so that each group understands the other, irrespective of the students they are working or living with (Ainscow, 2007).

The inclusion of children with ASD into mainstream settings creates challenges for teachers and students, and issues for students. In a study of the views of students with autism, Humphrey and Lewis (2008) identified a range of issues including bullying. Professional learning and development programmes need to address these issues in order to bring about sustainable change and the inclusion of students with ASD.

Parent involvement in these programmes is also considered critical (Benson, Karlof, & Siperstein, 2008). Factors important to home-school involvement of parents regarding their children with ASD were explored by Benson, Karlof, and Siperstein (2008). This study sought to "(1) describe how parents of young children with ASD participate in their child's education, and (2) assess the relative contribution of child, family, and school factors in explaining variation in the intensity of parents' school- and home-based educational participation" (p. 49). The study drew on a pool of participants from 35 ASD programmes for children (ages 3-7) and their parents. One hundred and ten children and their parents participated in the study. Questionnaires and in depth interviews were used to explore the involvement of parents, and their relationships with teachers, specialists and home service providers. The results of this study showed that the single most powerful predictor of maternal involvement was "the extent to which teachers and other school personnel encourage, provide opportunities for, and actively support involvement" (p. 58). The implication of this finding for professional learning and development programmes is that similarly facilitators must encourage and actively support parents to ensure their involvement.

The training of young people with ASD to improve their question-asking skills was explored by Palmen, Didden, and Arts (2008). Working in a small-group training situation, Palmen and colleagues explored how nine adolescents with ASD could be supported to improve their own self-management strategies. Eight of the participants learned new skills, and were empowered to sustain changes and learning over time and across contexts. This finding suggests that in some cases, where appropriate, the learning of children and young people with ASD could be improved by including them in part of the professional learning and development programme.

The Best Evidence Synthesis on the characteristics of professional development linked to enhanced pedagogy and children's learning in early childhood settings (Mitchell & Cubey, 2003) identified eight characteristics of effective professional development. These included:

(1) incorporating participants' own aspirations, skills, knowledge and understanding

(2) providing theoretical and content knowledge and information about alternative practices

(3) involving participants in investigating pedagogy within their own settings

(4) analysing data from their own settings

(5) challenging assumptions and extending thinking

(6) supporting educational practice that is inclusive

(7) helping participants change educational practice, beliefs, understanding, and/or attitudes

(8) helping participants gain awareness of their own thinking, actions, and influence.

In addition, the duration and intensity of professional development, the characteristics of participants, as well as the programme's organisation were all found to be influential in facilitating or limiting the effectiveness of professional development. These characteristics were linked to high quality and successful professional development programmes for early childhood centre staff. An important focus of the Best Evidence Synthesis was on professional development that supported educational practice that is inclusive of diverse children, families, and whānau. As such, Mitchell and Cubey's findings serve as a useful reference for developing and evaluating ASD professional learning and development programmes.

Priority Question One (b): What are the characteristics of content/design, implementation and outcomes that contribute to enhancing the quality of life for people with ASD?

<u>What did the literature say?</u>

Carrington and Graham (2001) have argued that "more qualitative research in the field of autism is necessary to achieve an in depth exploration of the real-life experiences of these individuals from their own perspective" (p. 47). Humphrey and Lewis's study (2008) attempted to address this. They set out to:

- explore the views of pupils with ASD about mainstream education;
- document the everyday experiences of these pupils in mainstream schools; and
- identify practices in mainstream schools that facilitated or constrained the learning and participation of students with ASD. (p. 25)

The findings of this study showed that students with ASD received many negative messages. They reported being perceived as "retarded' and as having "a bad brain." These students had a strong sense of needing to fit in. However, the strategies they used to fit in, at times compounded the bullying they experienced from their peers. Therefore, understanding issues and events from the perspective of students with ASD is an important component of any professional development programme that aims to enhance the quality of life for people with ASD.

Mental health issues and associated intervention and support for children with ASD is a growing and an unexplored area (Bryson, Corrigan, McDonald, & Holmes, 2008). Bryson and colleagues argue for a "disorder-specific training" for parents and educators (p. 80) to address the needs of children with ASD as well as any associated mental health problems. They believe this is necessary "to address the inter-system and lifelong needs of children with complex, social, communication and behavioural problems" (p. 80).

In a recent study, Chiang (2008) examined communication interventions involving peers and classroom teachers in educational settings involving 32 children and pre-adolescents diagnosed with autism. One of the key findings of this study was that children with autism relied on prompts to facilitate their communication with teachers but did not need as explicit or direct prompts when communicating with their peers. Higher levels of communicative function in these children were observed during lunchtimes. This suggests that professional development for teachers should ensure that all settings within the school are discussed and explored as potential learning contexts.

Research by Anderson, Birkin, Seymour, and Moore (2005) evaluated the effectiveness of the EarlyBird programme (an early intervention programme for parents of children with autism

spectrum disorders which was designed in the United Kingdom in 1997, and introduced in New Zealand in 2001). The researchers found that parents who attended the programme soon after their child was identified as having ASD developed a greater understanding of ASD, and developed skills that helped them support their child's learning and manage their child's behaviour. They further found that these skills were maintained three months after participating in the programme. Their evaluation showed that not everyone who could benefit from the programme was taking part and that the programme needed to be adapted to meet the needs of a range of ethnic groups. This suggests that ASD professional learning and development programmes should be designed around *early* intervention for parents and be adaptable for a range of ethnic groups. These factors in a professional development programme will help contribute to enhancing the quality of life for people with ASD.

REFERENCES

Ainscow, M. (2007). From special education to effective schools for all: A review of the progress so far. In L. Florian (Ed.), *The SAGE Handbook of Special Education* (pp.146-159). London: Sage.

Anderson, A., Birkin, C., Seymour, F., & Moore, D. (2006). *The Effectiveness of EarlyBird.* Final report of the EarlyBird Evaluation in New Zealand. Report commissioned by the Ministries of Education and Health, Wellington, New Zealand.

Benson, P., Karlof, K. L., & Siperstein, G. N. (2008). Maternal involvement in the education of young children with autism spectrum disorders. *Autism. The International Journal of Research and Practice, 12*(1), 47-64.

Bryson, S. A., Corrigan, S. K., McDonald, T. P., & Holmes, C. (2008). Characteristics of children with autism spectrum disorder: Effectiveness of small group training. *Autism. The International Journal of Research and Practice, 12*(1), 65-82.

Carrington, S., & Graham, L. (2001). Perceptions of school by two teenage boys with Asperger's Syndrome and their mothers. A qualitative study. *Autism, 5*(1), 37-48.

Chiang, H-M. (2008). Communicative spontaneity of children with autism. *Autism. The International Journal of Research and Practice, 12*(1), 9-22.

Davidson, E. J. (2005). *Evaluation Methodology basics*. Thousand Oaks, CA: Sage.

Humphrey, N., & Lewis, S. (2008). 'Make me normal': The views and experiences of pupils on the autistic spectrum in mainstream secondary schools. *Autism. The International Journal of Research and Practice, 12* (1), 23-46.

Mitchell, L., & Cubey, P. (2003). *Characteristics of Effective Professional Development Linked to Enhanced Pedagogy and Children's Learning in Early Childhood Settings: Best Evidence Synthesis*. Wellington: Ministry of Education.

Palmen, A., Didden, R., & Arts, M. (2008). Improving question asking in high functioning adolescents with autism spectrum disorder: Effectiveness of small group training. *Autism. The International Journal of Research and Practice, 12*(1), 83-98.

Timperley. H. (2003). *Shifting the Focus: Achievement Information for Professional Learning. A Summary of the Sustainability of Professional Development in Literacy: Parts 1 and 2*. Research commissioned by the Ministry of Education, Wellington, New Zealand.

Appendix Eight: Final Course Feedback Data

Table 7: Mean Responses[a] to the Final Course Feedback Forms

	2007		2008		2009	
	N	Mean	N	Mean	N	Mean
1. Were the expectations for this course clearly outlined?	36	4.61	279	4.59	272	4.49
2. How effectively was each session structured (in terms of pace, types of activity, amount of information)?	37	4.76	283	4.46	274	4.45
[b]3. Did you find the work you did in groups valuable?	36	4.69			274	4.70
4. Did you find the work you did in your child-based teams valuable?	37	4.84	284	4.84	273	4.85
5. Did the course address its stated goals?	37	4.76	278	4.71	272	4.68
6. Did the facilitators treat participants fairly and with respect?	37	4.86	284	4.89	275	4.95
7. Were the facilitators receptive to differing viewpoints or opinions?	36	4.89	282	4.78	272	4.83
8. Did the facilitators use examples you could relate to that were practical?	37	4.89	281	4.69	275	4.75
9. Did the facilitators make sure that the necessary materials and equipment for practical sessions were available?	36	4.94	284	4.73	274	4.73
10. How would you rate the facilitators' ability to communicate ideas and information?	36	4.92	282	4.72	275	4.69
11. Overall, how effective have you found the facilitators in teaching this course?	37	4.95	282	4.74	275	4.76
12. Did the course use appropriate resources (print, OHTs, videos, flip charts, etc.) to enhance your understanding of this course?	36	4.86	282	4.52	272	4.48

13. Were the prior readings useful and applicable to the sessions?	36	4.81	280	4.33	232	4.25
14. Was the homework relevant and useful to assist your understanding?	35	4.71	276	4.08	231	4.20
15. How valuable were the course handouts as aids to learning?	36	4.75	278	4.56	234	4.47
How useful did you find the information on:						
16. What is Autism?	35	4.89	277	4.58	232	4.66
17. Communication	36	4.86	277	4.63	233	4.65
18. Socialisation	36	4.86	278	4.64	233	4.68
19. Cognition (imagination) or thinking	36	4.86	278	4.58	232	4.65
20. Behaviour	35	4.71	279	4.61	231	4.62
[c]21. Teams and setting goals	35	4.71	280	4.68	234	4.63
22. Did the course provide practical ideas you have been able to use with the child you are working with?	37	4.81	282	4.67	235	4.71
23. Are the strategies you have been taught useful and practical?	37	4.89	282	4.69	235	4.68
24. Will you continue to use the strategies you have been taught on the course in your team?	37	4.86	281	4.77	234	4.73

[a] Participants were asked to respond on a 1 (low) to 5 (high) scale.

[b] Q3 was not asked in 2008.

[c] Q21 was phrased "School-wide issues and setting goals" in 2007.

Appendix Nine: Self-Assessment Data Across the Three-Year Evaluation

Table 8: Independent t-tests[a] Results – Participant Knowledge, Competency and Attitude Self-assessments for 2007, 2008, 2009

Level of knowledge

	2007				2008				2009			
	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)
4a. Autism	3.80	4.43	-.629	.254	3.74	4.55	-.809	.000	3.25	4.36	-1.108	.000
4b. Managing challenging behaviour	3.50	4.33	-.833	.151	3.80	4.32	-.519	.000	3.40	4.24	-.840	.000
4c. Intervention strategies	3.30	4.17	-.867	.306	3.78	4.41	-.631	.000	3.17	4.16	-.985	.000

Level of skill

	2007				2008				2009			
	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)
5a. Using a problem solving approach to decide goals and interventions	3.50	4.57	-1.071	.171	3.84	4.45	-.608	.000	3.28	4.21	-.923	.000
5b. Using visual supports	3.70	5.00	-1.300	.055	3.91	4.60	-.686	.000	3.49	4.47	-.985	.000
5c. Developing effective long and	3.44	4.29	-.841	.238	3.76	4.48	-.717	.000	3.19	4.22	-1.026	.000

	2007				2008				2009			
	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)
short term education and/or care plans												
5d. Using a wide range of strategies	3.67	4.33	-.667	.341	3.95	4.61	-.660	.000	3.43	4.35	-.913	.000
[b]5e. Developing goals and interventions that are culturally relevant									3.09	3.91	-.820	.000

Working in a team situation

	2007				2008				2009			
	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)
6a. Confidence	3.80	4.57	-.771	.324	4.06	4.62	-.559	.000	3.71	4.64	-.924	.000
6b. Effectiveness	3.88	4.33	-.458	.544	3.86	4.38	-.520	.000	3.46	4.35	-.889	.000
6c. Collaboration	4.00	4.43	-.429	.612	4.29	4.78	-.491	.000	3.71	4.64	-.927	.000
6d. Interpersonal skills	4.22	4.71	-.492	.568	4.35	4.79	-.442	.000	3.86	4.60	-.740	.000
6e. Communication skills	4.30	4.71	-.414	.603	4.43	4.87	-.437	.000	3.98	4.69	-.712	.000
6f. Understanding of others' perspectives and challenges	3.50	4.00	-.500	.473	4.28	4.68	-.405	.001	4.04	4.70	-.662	.000

Participants' ability

	2007				2008				2009			
	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)
8a. Communicate effectively with the child	4.13	4.86	-.732	.192	3.72	4.19	-.465	.001	3.60	4.29	-.699	.000
[f]8b. Understand how autism affects the child	3.43	4.60	-1.171	.060	3.85	4.62	-.776	.000	3.18	4.12	-.940	.000
8c. Cope with their problem behaviours	3.89	4.43	-.540	.342	3.67	4.38	-.713	.000	3.44	4.20	-.756	.000
8d. Know and utilise their strengths and interests	3.67	4.57	-.905	.091	3.80	4.48	-.685	.000	3.47	4.52	-1.047	.000
8e. Help the child manage stressful situations	3.56	4.29	-.730	.303	3.68	4.35	-.670	.000	3.36	4.06	-.699	.000
8f. Help the child communicate	4.11	4.86	-.746	.275	3.64	4.26	-.622	.000	3.41	4.09	-.687	.000
8g. Help the child socialise	3.56	4.57	-1.016	.145	3.25	4.15	-.895	.000	3.21	3.90	-.684	.000

[a] Participants were asked to respond on a 1 (low) to 6 (high) scale.

[b] Q5e was only asked in 2009.

[c] Q7e was not asked in 2009.

[d] Q7f was phrased "Organise themselves and do routine tasks" in 2009.

^e Q7i was phrased "Understand feelings and actions of others" in 2009.

^f Q8b was phrased "Understand autism from their point of view" in 2009.

Appendix Ten: Assessment of Children's Abilities Across the Three-Year Evaluation

Table 9: Independent t-tests[a] Results –Participants' Assessments of Children's Abilities in 2007, 2008, 2009

Child's ability

	2007				2008				2009			
	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)	Pre mean	Post mean	Mean difference	Sig. (ind. t-test)
7a. Communicate with other children	3.22	3.83	-.611	.173	2.30	2.68	-.381	.010	2.31	2.82	-.513	.001
7b. Communicate with adults	3.78	4.29	-.508	.274	2.84	3.02	-.184	.230	2.66	3.18	-.519	.000
7c. Socialise with other children	2.78	3.50	-.722	.303	2.14	2.47	-.331	.019	2.15	2.57	-.417	.002
7d. Socialise with adults	3.38	4.57	-1.196	.010	2.57	2.81	-.248	.090	2.57	2.97	-.404	.002
[c]7e. Relate to others	3.00	3.57	-.571	.336	2.07	2.47	-.392	.001				
[d]7f. Manage themselves	3.00	3.57	-.571	.331	2.47	2.78	-.313	.035	2.33	2.54	-.216	.122
7g. Handle stressful situations	2.22	3.14	-.921	.093	1.81	2.27	-.456	.000	1.87	2.21	-.341	.003
7h. Problem solve	2.56	3.14	-.587	.248	2.02	2.32	-.307	.036	2.03	2.35	-.327	.011
[e]7i. Take the perspective of others	2.67	3.29	-.619	.338	1.46	1.76	-.306	.008	2.01	2.30	-.293	.026

ⁱ In 2010 a change was made to the 'tips' programme. Instead of being delivered in two two-day sessions, the course is now run over three consecutive days. A discussion with the 'tips' Project Leader revealed that this change was made for mainly economical reasons. The money saved by providing the course in one three day session will allow more courses to be offered. The 'tips' Project Leader also believed the change would assist participants who found it difficult to organise four days of quality teacher release time, child-care and accommodate heavy workloads - situations which were widely reported in the 'tips' evaluation.

Participants were never questioned about a three-day course. However the data showed that the majority were happy with the length and structure of the course and many requested some type of follow-up. The intervening period between the two two-day blocks provided participants with the opportunity to reflect on and trial ideas presented in the first session and share this experience with other teams and the facilitators in the second session. This time between course sessions was mentioned by participants across all three years as being particularly valuable. It reinforces the PL and D and intervention nexus identified as a strength of the 'tips' programme. The reduction of this intervention aspect of the 'tips' programme has the potential to detract from its effectiveness. In order to retain this valuable reflection and practice time, an on-line, follow-up activity which enables participants to share ideas, experiences and seek feedback on strategies trialled could be considered.

Reducing the course from four days to three will have required the streamlining of content. In doing this it is hoped that the elements participants considered especially valuable (e.g. team work, practical emphasis and child focus) have been retained and that the needs of participants who reported being "brain exhausted" from so much new content at the end of the first two-day session have been taken into consideration.

Providing an effective PL and D course to as many people as possible within a limited budget will always be a difficult balancing act. The findings of the 'tips' evaluation emphasised the importance of having all significant members present. If reducing the course to three-days achieves this then that is a strong argument in its favour. More members may be able to attend because of the reduced time commitment and more courses can be offered. However, if the

'tips' courses are not fully subscribed and if they are significantly less effective because of the reduced time, potential information overload and the removal of the intervening reflection and practice period, then the change to a three-day course will need to be reviewed. It is suggested that this change be considered a pilot and that results be carefully monitored to determine the overall effectiveness of the three-day course in comparison to its four-day predecessor.