

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

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Executive Summary

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INTRODUCTION

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 which has been running throughout New Zealand since 2001.

The purpose of the 'tips' evaluation was to inform the future development of this programme and to provide lessons for other PL & D initiatives around ASD. 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. This Executive Summary focuses on the answers to these ten questions.¹

METHODOLOGY

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. Five data gathering measures and strategies were used. These were: written surveys/questionnaires, face-to-face interviews, observations, document analysis and Advisory Group and expert consultation. Table 1 shows which measures and strategies were used for each priority question over the three-year evaluation period.

¹ A Summary Report of the three-year evaluation has been produced and readers are referred to this and the annual reports for full details of the evaluation. This Executive Summary presents a selection of information from the Summary Report to enable interested parties to obtain a brief overview of the Evaluation Findings.

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	Facilitator interview	CYF manager & Organiser interview	Documentary analysis	Literature Review	Advisory & Expert input
1	Х	Х			x	х	Х		Х	Х	Х
2	Х	Х	Х	Х	х	Х	Х	Х	Х		
3	Х	Х		Х	Х	Х	Х		Х		
4	Х	Х	х	х	x	х	Х		Х		
5					X	Х			Х		
6	Х	Х			х	Х	Х				
7					X	Х			Х		
8					Х	Х					
9					x	Х					
10					х	Х					

Evaluation Approach

The CYF and Year 2 Education evaluations used Davidson's² methodology to analyse data collected and to structure the respective reports. Briefly, the main thrust of the Davidson approach involved:

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

² Davidson, E.J. (2005). *Evaluation Methodology Basics. The Nuts and Bolts of Sound Evaluation.* Thousand Oaks: Sage Publications. For a discussion of the evaluators' perceptions of the strengths and weaknesses of Davidson's methodology, see the Summary Report.

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

In Year Three, thematic analysis and summaries were used for qualitative data and quantitative data were analysed using the Statistical Package for Social Science (SPSS) computer software.

The response rate for the final course feedback forms was consistently high (ranging from 68.5% to 80.4%). Unfortunately, the response rate for the pre- and post-course surveys sat around the 30% mark with the exception of the pre-course survey for 2009 which received a 78.4% return rate. While the low survey response rate was disappointing, it was compensated for by the large amount of data collected from other sources.

SUMMARY OF FINDINGS

Demographic Data

Twenty-eight 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). The courses were held in eight North Island and five South Island venues. The largest numbers were in the Auckland region, followed by Wellington and Canterbury.

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).

EVALUATION QUESTIONS

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

In order to answer this 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
- 3. New Zealand ASD Guideline $(2008)^3$
- Teacher Professional Learning and Development. Best Evidence Synthesis Iteration⁴

This examination confirmed the 57 merit criteria identified in the first two years of the evaluation (see Appendix One) as vital components of a high quality ASD-specific PL & D programme.

Dual Focus

A further consideration of these 57 merit criteria indicated 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

³ Ministries of Health and Education. (2008). *New Zealand Autism Spectrum Disorder Guideline*. Wellington, Ministry of Health

⁴ 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.

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.

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

Data indicated 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 One (c) (all agencies): 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."

Davidson (2005, p. 34) maintained that evidence decision makers require would need to show that:

- 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.

Priority Question Two (all agencies): How valuable/high quality is the professional learning and development programmes' content/design and delivery?

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 (all agencies): 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?

A comparison data across the three years of the evaluation 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. 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.

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. However, they 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.

Priority Question Four (CYF & 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?

Case study participants across all years 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 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 (Ministry of Education) and Priority Question Six (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 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.

Across all three years participants' pre- and post-course assessments of the focus children's abilities showed gains in all areas. 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. 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 Five⁵ (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)?

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

⁵ Priority Five question for the CYF evaluation was addressed by CYF and the Ministry of Health

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 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 (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 Year Two facilitators reported 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 (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? $\frac{6}{2}$ (c) What evidence is there that the duration and intensity was both feasible and sufficient to achieve meaningful impacts?

Data from participants in Year Three indicated 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.

⁶ 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 (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)?

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.

Data showed that in all three years the course proved to be highly exportable. Widespread use of 'tips' learning indicates that rather than providing a "cook-book, one-way" approach, the 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 (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?

A detailed cost analysis was neither required nor produced to answer this question. Feedback from participants indicated that they 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.

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.

	MERIT CRITERIA: PROCESS						
	Team Focused	Needs-Based	Knowledge-Based	Pedagogically Sound			
Organisation, Content and Design <i>The course</i>	 includes all significant team members provides opportunities to establish support networks 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 			
Delivery and implementation <i>Th</i> e course	 facilitates sharing of aspirations, skills, knowledge and understanding facilitates collaborative team work equally values all team members' contributions 	12. focuses on child's needs13. focuses on family's needs14. 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 			

APPENDIX ONE: Merit Criteria: Process and Outcomes

	MERIT CRITERIA: OUTCOMES						
	Team Focused	Needs-Based	Knowledge-Based	Pedagogically Sound			
Knowledge, skills and attitude gain As a result of the course participants …	 shared knowledge 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 			
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 			