A Preliminary Evaluation of the Incredible Years Teacher Programme

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This study reports on analysis of official record data gathered on 237 primary teachers enrolled in the Incredible Years Teacher (IYT) programme during 2010-2011. IYT is a group based programme that provides teachers with training in skills to manage disruptive classroom behaviours. Before and after comparisons showed that after the provision of IYT teachers reported significant ($p < 0.001$) increases in the frequency of use and usefulness of positive behaviour management strategies. In addition there were generally high levels of teacher satisfaction with various aspects of the programme including: the overall programme; teaching strategies used in the course; specific teaching techniques; and workshop leaders. These findings provide preliminary evidence of the efficacy of IYT and teacher satisfaction with the programme. It is suggested that further evaluations of the programme are conducted using a randomised wait list design.

In recent years there has been an increasing focus in New Zealand health, education and social policy on the identification, implementation and evaluation of programmes and interventions aimed at the prevention, treatment and management of conduct problems in young people. This work has been underwritten by a number of reports prepared by the Government Advisory Group on Conduct Problems which have presented overviews of the evidence and identified effective programmes (Blissett et al., 2011; Blissett et al., 2009a; 2009b). In turn, these reviews have underwritten the Positive Behaviour for Learning (PB4L) strategy developed by the Ministry of Education. Briefly PB4L is a strategy developed by the Ministry of Education to implement a series of behavioural interventions over a 5 year period. These interventions include: the Incredible Years Parent Programme; the Incredible Years Teacher Programme; School Wide Behaviour Support. These programmes will be supplemented by a Behaviour Crisis Response Service and

a wrap-around Intensive Behavioural Service (Ministry of Education, 2011).

Central to these plans has been a commitment to evaluating the effectiveness of this programme in a New Zealand context. An evaluation of the Incredible Years Basic Parent Programme (IYBPP) is well underway. This evaluation has involved two stages. In the first stage existing record data supplied by the Ministry of Education on the implementation and outcomes of the programme were analysed (Fergusson, Stanley, & Horwood, 2009). This analysis concluded: "These preliminary data are consistent with the view that IYBPP is an effective and culturally appropriate programme. There is a need for a more comprehensive evaluation using pilot research to assess the fidelity of programme delivery and randomized trials to assess programme efficacy" (p. 76).

The Incredible Years Parent Programme is currently being evaluated in a multi-site study being conducted by the Ministry of Social Development's

Centre for Research and Evaluation. This evaluation will examine the progress of approximately 50 families per site at three sites (Christchurch, Palmerston North and Tauranga) studied over a 12 month period from the point of enrolment into the programme. This study will collect in depth data on a wide range of topics relating to the implementation of the programme; programme efficacy; cultural factors; and client satisfaction.

In this paper we begin the development of a similar evaluation process for the Incredible Years Teacher (IYT) programme (The Incredible Years Inc, 2012). IYT is an evidence-based and manualised programme that is focussed on strengthening teacher classroom management strategies, promoting children's pro-social behaviour and school readiness and reducing classroom aggression and non-cooperation with peers and teachers. Additionally, the intervention focuses on ways teachers can effectively collaborate with parents to support their school involvement and promote consistency from home to school. The programme can be useful for teachers, teacher aides, Resource Teachers of Learning and Behaviour (RTLB), psychologists, and any school personnel working with young children aged 3-8 years.

The programme comprises the following components:

1. Teacher Programme 1 - Building Positive Relationships with Students and The Proactive Teacher
2. Teacher Programme 2 - Teacher Attention, Coaching, Encouragement & Praise

3. Teacher Programme 3 - Motivating Students Through Incentives

4. Teacher Programme 4 - Decreasing Inappropriate Behaviour - Ignoring and Redirecting

5. Teacher Programme 5 - Decreasing Inappropriate Behaviour - Follow Through With Consequences

6. Teacher Programme 6 - Emotional Regulation, Social Skills and Problem-Solving Training

In this paper we report the findings of a preliminary analysis of the IYT programme using officially recorded data from a sample of 237 teachers who were provided with the IYT programme during 2010-2011 in the first stage of the Ministry of Education's roll out of this programme as part of the PB4L strategy. The general aims of the evaluation are:

1. To conduct before and after comparisons of teacher assessments of various aspects of behaviour management skills before and after the provision of the IYT programme. The aim of this analysis is to gain preliminary estimates of the likely effect sizes of IYT training on teacher management of classroom behaviours.

2. To examine levels of teacher satisfaction with various aspects of the programme.

Ideally, it would be useful to compare the response of Māori and non-Māori teachers to the programme. However, this was not possible because ethnicity data was not collected for the majority of teachers.

Method

Participants

The analysis is based on data obtained from a sample of 237 primary school teachers who were enrolled in an IYT course in 2010-2011 and who completed the evaluation forms. These teachers were enrolled by a process in which decile 1-3 schools were provided with information by district Special Education staff and were invited to

enrol teachers in the programme. To be eligible for the programme teachers had to hold a teaching qualification, be currently in the classroom and teaching 5-8 year olds. The teachers included in this study came from a series of groups whose leaders were handpicked as the first cohort of IYT Group leaders. They were trained in 2009 and selected to begin the roll-out of the programme because they had demonstrated they could deliver an Incredible Years programme (IY Parent) with fidelity and collect data as required. Because of these selection processes, the extent to which the sample is representative of all teachers provided with IYT is unknown.

Intervention

Teachers enrolled in the IYT course attended a series of six one day workshops spread over a six month period followed by a 1 day refresher course approximately three months later. The programme was delivered in groups of 14-16 participants by two trained IYT group leaders.

Measures

During the provision of IYT, teachers enrolled in courses were asked to complete a number of standardised assessment instruments developed by Incredible Years to assess the IYT programme. These measures included:

1. The Teacher Strategies Questionnaire: This is a 44 item questionnaire which assesses a number of domains of teacher classroom management strategies. This questionnaire can be scored to produce a number of scales. These include:

    a. Teacher confidence in managing current and future classroom behaviour problems.

    b. The frequency with which the teacher reports using a range of specific teaching techniques in their classroom behaviour management. Separate scores are created reflecting the use of positive behaviour management strategies and inappropriate management strategies. The positive strategies scale can be further subdivided into three separate subscales

reflecting: the use of praise and incentives; the proactive management of behaviour; and limit setting on unacceptable behaviours.

    c. The extent to which the teacher finds the various positive and inappropriate strategies useful in managing classroom behaviour.

    d. The extent to which the teacher makes positive approaches to parents to increase parental involvement.

In all cases these subscales are created by summing a series of Likert scored questionnaire items to produce summative scales.

The Teacher Strategies Questionnaire was administered within a week of the first day of the course and was re-administered within a week of the last day of the course. The time between the first administration of the questionnaire and the follow up administration was typically six months. Scale reliabilities (assessed using coefficient α) for the pre-course and post-course Teacher Strategies scales were respectively: confidence managing classroom behaviour (α = .78, .86); use of positive strategies total frequency (α = .76, .81) and usefulness (α = .86, .89); use of inappropriate strategies frequency (α = .64, .56) and usefulness (α = .78, .79); positive approaches with parents (α = .79, .84).

2. The Teacher Workshop Satisfaction Questionnaire. This is a 32 item questionnaire which assesses the teacher's satisfaction with various aspects of the IYT programme. This questionnaire provides assessments of a number of programme domains including:

    a. Feelings about the overall programme.

    b. The usefulness of the teaching strategies used in the workshops.

    c. The usefulness of specific teaching techniques for the classroom setting.

    d. Evaluation of the group leader(s).

These assessments are made on 7-point Likert scales with 1 denoting that the IYT programme was rated

extremely negatively, 7 denoting that the programme was viewed extremely positively and 4 denoting that the respondent had a neutral position about the programme. This questionnaire was administered on the last day of the course.

Statistical analysis

Before and after comparisons were made of the mean scores on the subscales of the Teacher Strategies Questionnaire (see Table 1). Tests of the significance of pre-course/post-course differences were obtained from paired t-tests. Effect sizes describing pre/post differences were obtained using Cohen's d. In this instance, Cohen's d measures the extent of change in standard deviation units between the pre and post test scores (Cohen, 1988).

The responses to the Teacher Workshop Questionnaire were tabulated (Table 2). Because these responses were highly skewed to the positive end of the distribution, they were recoded to produce a 4-point scale as follows:

1. Negative response: any negative response to the item (i.e. score = 1-3).

2. Neutral response: a neutral response to the item (i.e. score = 4).

3. Positive response: any response suggesting that the respondent had a positive view of the item but was not strongly positive (i.e. score = 5, 6).

4. Strongly positive response: a strongly positive response to the item (i.e. score = 7).

Results

Table 1 compares the sample of teachers enrolled in the IYT programme on a series of scale measures assessed at the point of course enrolment and after the completion of the IYT programme. These differences were tested for statistical significance using t-tests for paired comparisons. The size of effect was assessed using Cohen's *d* (see Methods). It will be noted that sample sizes vary from as low as 177 to as high as 224 depending on the comparison made. These sample size fluctuations are a result of missing data resulting from teachers not fully completing all of the assessment forms. The Table produces a generally consistent set of findings:

1. For all scale measures assessing classroom strategies and teaching techniques, teachers reported consistent

improvements in their frequency of use of positive behaviour management strategies. This trend is reflected in the effect size (*d* = 0.86) associated with the total positive strategies measure. This effect size shows that following the provision of IYT there was a very substantial change in teacher reports of the use of positive strategies.

2. Similar findings were obtained for teacher assessments of the usefulness of various strategies. This is reflected in the effect size (*d* = 0.88) for changes in teacher reports of the usefulness of various positive teaching strategies before and after the provision of IYT. This effect size suggests a substantial change in teacher perceptions of the usefulness of positive behaviour management strategies in the classroom setting.

3. Teachers also reported a moderate improvement in their overall confidence in managing classroom

Table 1

Comparison of mean scores on outcome measures before and after completion of IYT programme

Measure	N	Pre-Programme Mean (SD)	Post-Programme Mean (SD)	Cohen's d	p
Confidence Managing Classroom Behaviour	177	10.81 (1.98)	11.99 (2.16)	0.60	<0.001
Teaching Techniques (Frequency of Use)					
Positive strategies					
Praise and incentives	224	21.46 (4.14)	24.35 (3.62)	0.70	<0.001
Proactive strategies	221	22.22 (3.96)	24.90 (3.87)	0.68	<0.001
Limit-setting strategies	220	16.61 (2.75)	18.07 (2.88)	0.53	<0.001
Total positive strategies	220	60.19 (8.32)	67.32 (8.09)	0.86	<0.001
Inappropriate strategies	224	14.63 (3.05)	13.46 (2.67)	-0.38	<0.001
Teaching Techniques (Usefulness)					
Positive strategies					
Praise and incentives	218	22.41 (4.13)	25.52 (3.45)	0.76	<0.001
Proactive strategies	207	23.50 (4.17)	26.77 (4.12)	0.78	<0.001
Limit-setting strategies	213	17.23 (3.08)	19.29 (3.12)	0.67	<0.001
Total positive strategies	207	62.47 (9.80)	71.10 (9.69)	0.88	<0.001
Inappropriate strategies	206	18.04 (5.26)	16.73 (5.27)	-0.25	<0.001
Positive Approaches with Parents	209	27.49 (6.44)	29.04 (6.64)	0.24	<0.005

Table 2

Summary of teacher satisfaction with IYT programme (*N* = 237)

a) The Overall Programme

Item		Negative Response %	Neutral Response %	Positive Response %	Very Positive Response %
1.	The target student's behaviour that I developed a behaviour plan for is: worse/ the same/ improved/ greatly improved	2.1	0.9	69.7	27.3
2.	Other students' problems which I/we have tried to change using the methods presented in this workshop are: worse/ the same/ improved/ greatly improved	0.4	2.5	84.0	13.1
3.	My feelings about my current students' progress are that I am: dissatisfied/ neutral/ satisfied/ greatly satisfied	0.8	1.7	71.0	22.3
4.	My expectation for good results from this workshop is: pessimistic/ neutral/ optimistic/ very optimistic	1.3	3.4	68.8	26.6
5.	I feel that the approach used to change students' behaviour problems in this workshop is: inappropriate/ neutral/ appropriate/ greatly appropriate	0.4	0.0	58.2	41.4
6.	Would you recommend this workshop to another teacher? not recommend/ neutral/ recommend/ strongly recommend	1.7	3.0	39.8	55.5
7.	How confident are you that you will be able to manage current behaviour problems in your classroom? unconfident/ neutral/ confident/ very confident	0.8	0.0	60.8	38.4
8.	How confident are you that you will be able to manage future behaviour problems in your classroom? Unconfident/ neutral/ confident/ very confident	0.8	0.0	66.9	32.3

b) Usefulness of Teaching Strategies

Item		Not Useful %	Neutral %	Useful %	Extremely Useful %
1.	Information presented by the group leader in lectures was:	0.4	0.9	57.5	41.2
2.	Demonstration of skills through the use of videotapes vignettes was:	11.1	8.2	70.5	10.3
3.	Teachers' group discussion and sharing of ideas was:	0.0	0.9	29.2	69.9
4.	Practising skills in small groups during the workshop was:	4.3	9.0	60.9	25.8
5.	Small group breakouts to work on behaviour plans was:	0.9	6.4	64.8	27.9
6.	Support from other teachers was:	0.0	0.9	45.7	53.4
7.	Suggested classroom activity assignments were:	0.9	6.0	74.4	18.8
8.	Book "How to Promote Children's Social and Emotional Competence" was:	1.3	4.7	51.1	42.9

c) Usefulness of Specific Teaching Techniques

Item	Not Useful %	Neutral %	Useful %	Extremely Useful %
1. Child-directed play	0.9	6.5	72.4	15.2
2. Descriptive commenting/interactive reading	0.0	5.7	75.9	18.4
3. Praise/encouragement	0.0	0.0	24.0	76.0
4. Incentives	0.4	2.6	52.4	39.6
5. Ignoring	1.3	2.1	63.0	33.6
6. Good commands/clear limit setting	0.0	0.4	34.6	65.0
7. Time out/calm down place	0.9	6.8	66.2	26.1
8. Loss of privileges, logical consequences	0.4	2.1	70.5	26.9
9. Redirects/distraction	0.0	1.7	57.4	40.9
10. Social and emotional coaching	0.0	1.3	62.9	35.8
11. Problem-solving training	0.0	1.3	60.6	38.1

d) Evaluation of Workshop Group Leaders

Item	Negative Response %	Average/ Neutral Response %	Positive Response %	Very Positive Response %
1. I feel that the leader's teaching was: poor/ average/ superior/ excellent	0.2	7.7	50.6	41.5
2. The leader's preparation was: poor/ average/ superior/ excellent	0.6	7.2	44.9	47.3
3. Concerning the leader's interest and concern in me and my student, it was: poor/ average/ superior/ excellent	1.2	5.8	47.7	45.3
4. At this point, I feel that the leader of the workshop was: not helpful/ neutral/ helpful/ extremely helpful	1.4	1.6	43.1	53.9
5. Concerning my personal feelings toward the leader, I: dislike him,her/ neutral/ like him,her/ like him,her very much	0.4	1.2	37.5	60.9

behaviours following IYT ($d = 0.60$).

4. In addition following IYT there were modest reductions in the frequency ($d = -0.38$) and rated usefulness ($d = -0.25$) of inappropriate strategies, and a modest increase in positive engagement with parents ($d = 0.24$).

Table 2 provides a summary of teacher evaluations and satisfaction with the IYT programme. These ratings suggest that teachers had generally positive views of the programme and few were critical of IYT. More specifically:

1. For ratings of the overall programme (Table 2a) over 95% provided a positive response and less than 5%

made negative comments.

2. For ratings of usefulness of teaching strategies (Table 2b) over 90% of respondents provided a positive response to most items. An exception to this trend was for the usefulness of videotaped vignettes where nearly 20% did not give this material a positive rating.

3. Overall ratings of specific teaching techniques (Table 2c) were generally positive with over 90% of teachers rating these methods as being useful or extremely useful.

4. Evaluations of workshop group leaders (Table 2d) were also generally positive with over 90% of teachers providing

positive ratings.

Discussion

In this analysis we have used record data supplied by the Ministry of Education to provide a preliminary assessment of the efficacy and acceptability of the IYT programme for New Zealand teachers.

The overall findings of this analysis are generally very positive and suggest that, on the basis of teacher report data, participation in the IYT programme led to increased use of positive behaviour management strategies and an increase in teacher perceptions of the usefulness of these strategies. Teachers were also more confident in their overall management of classroom behaviour problems. On the basis of before and after comparisons, effect sizes for these outcomes were in the range of

moderate to strong using Cohen's d (d = 0.60-0.88).

There were also high levels of satisfaction with the programme with over 90% of teachers providing positive ratings of: a) the overall programme; b) the usefulness of teaching strategies; c) specific teaching techniques and d) group leaders.

Taken at face value these findings clearly suggest that the IYT programme achieved its primary objectives of increasing the level of teacher knowledge and competence in classroom behaviour management. There are, however, some important limitations on the available data that need to be taken into account.

First, and perhaps foremost, this evaluation has relied on teacher report data to assess the extent to which IYT led to changes in classroom behaviour management. The liability of these data is that teacher reports may not accurately reflect changes in the classroom situation. Furthermore, teacher reports may be coloured by the experience of attending IYT. To address these issues requires that the teacher report data gathered in this study is supplemented by direct observations of both teacher and pupil behaviour in the classroom context.

A second important limitation of the study is that the estimation of the effects of IYT on teacher behaviour have been based on a before/after design rather than on a randomised trial which compares groups of teachers who are exposed and not exposed to IYT. The use of a before and after design may be subject to biases arising from uncontrolled time trends in the evidence (Kirk, 1968). For these reasons the effect size estimates reported should be seen as tentative rather than definitive.

A third limitation of the study was that ethnicity was not gathered on the teacher sample. This makes it impossible to assess the extent to which Māori and non-Māori teachers viewed the programme as favourable. However, given the generally high levels of satisfaction with IYT it seems likely that both Māori and non-Māori teachers will view the programme favourably.

A final limitation of the study is that because of the method of sample recruitment, the extent to which the obtained sample is representative of all teachers provided with IYT is unknown.

In summary, while the present analysis suggests that IYT is both effective and seen in a positive light by teachers these conclusions are limited by both the research design and problems of measurement.

The best way of addressing these issues would be to extend the evaluation of IYT by using a wait list randomised trial in which teachers eligible to enter the programme are assigned to either IYT or wait list control groups with both groups being assessed on a battery of measures including direct classroom observation, to determine the extent that the provision of IYT leads to positive changes in teacher management of classroom behaviours and thence to improvements in student behaviour within the classroom context.

Acknowledgement

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