# *Early days, much promise*

## An evaluation of the Home Instruction Program for Preschool Youngsters (HIPPY) in Australia

Tim Gilley

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# Foreword

The Brotherhood of St Laurence has had a longstanding interest in the welfare of families with young children. We know that the early years of someone's life are among the most important and can shape future opportunities and experiences. In particular, the initial period of engagement with learning and the education system is a crucial stage of development, and will influence educational attachment and attainment throughout primary and secondary school. This is all the more important given the critical effect of educational achievement on later employment and career choices.

It was for these reasons that the Brotherhood of St Laurence chose to adopt the Home Instruction Program for Preschool Youngsters (HIPPY) as a pilot program. The HIPPY model was developed in the late 1960s in Israel, and in 2001 was operating in seven countries. HIPPY in Australia aims to improve children's educational attainment by providing parents with information and support to undertake pre-set educational lessons with their four and five-year-old children. HIPPY has been operating in Australia since 1998 when the first program was set up in Fitzroy, Melbourne.

We were also keen to evaluate HIPPY so that others could learn from our experience and we were fortunate to be able to collaborate with Victoria University (VU) to this end. The research reported here was an outcome and process evaluation of the second implementation of HIPPY in Australia. The research was the joint effort of VU and the BSL, under the auspice of the Australia Research Council. The collaborative contributions of HIPPY International and the Australian HIPPY Committee were also critical in the planning stages. The research was conducted at the School of Psychology, Victoria University, by Tim Gilley as the subject of his PhD thesis (available through the libraries of both VU and the BSL).

The project was funded by an Australia Research Council Strategic Partnership with Industry – Research and Training (SPIRT) Grant, with Associate Professor Suzanne Dean (VU) as chief investigator, and Dr Cynthia Leung (VU) and Janet Taylor (BSL) as co-investigators.

This project forms part of a complex, multi-agency program of research relating to the rationale for, and implementation and value of HIPPY in Australia, conducted from the School of Psychology at VU, nested within its Wellness Promotion Unit, in association with HIPPY International at the Hebrew University of Jerusalem in Israel, and with HIPPY Australia.

The results of this study show that HIPPY programs can have a significant impact on learning for young children and can be readily adapted to suit Australian conditions. We hope the evidence from this report supports the development of HIPPY programs in educationally disadvantaged communities throughout Australia.


**Stephen Ziguras**                         **Cath Scarth**
**Acting General Manager**                  **General Manager**
**Social Action and Research**              **Community Services**

# Acknowledgments

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# Summary

This paper reports the evaluation of the implementation of the Home Instruction Program for Preschool Youngsters (HIPPY) in inner Melbourne from 1999 to 2000. HIPPY (now called Home Instruction for Parents of Preschool Youngsters) aims to improve children's educational attainment and self-esteem in the first years of school. The HIPPY model was developed in the late 1960s in Israel, and in 2001 was operating in seven countries. The model provides parents with information and support to undertake pre-set educational lessons with their four and five-year-old children. According to the model, HIPPY provides for at least 75 hours of parent to child instruction over the two years of the program. Parents are assisted through a fortnightly visit from a home tutor who has been trained to deliver the lesson through the use of role play. The home tutor is usually selected from amongst families participating in the program and attends a weekly training program with the coordinator. HIPPY was started in Fitzroy by the BSL in 1998.

The evaluation explored how the program was implemented, the views of participants, the outcomes for children and parents participating in the program, the implications of providing HIPPY programs in the multicultural context of Australia and lessons for future evaluations of HIPPY in Australia.

Thirty-three children participated in the HIPPY program, 26 of these in a program run for two years in Fitzroy and 7 in a program offered for only one year in North Melbourne. The parents came from a diverse range of cultural backgrounds, and from 10 different language groups.

Overall, HIPPY staff very closely followed the approaches detailed in the program model. The approach chosen in the multicultural environment of Melbourne was to offer the program in both the family's first language and English. It was left to the parents and home tutors to decide upon the appropriate mix of languages. Despite the consequent complexity of language issues, the program was provided in ways which parents reported as working well for them. From parents' and HIPPY staff comments, this was largely due to the use of bilingual home tutors for four of the language groups, and flexibility in how much of the program was taught in English and how much in the parents' first language.

Parents reported that their children had made gains which they believed had helped them at school. These gains were concentrated in the areas of specific HIPPY activities, literacy development and an improved orientation towards learning. The effect of the program was further assessed by comparing measures of educational achievement and self-esteem of children participating in HIPPY with children from a matched comparison group, and with results from national population studies. The results showed that HIPPY children were more likely than the comparison group to have higher self-esteem and education scores, suggesting that HIPPY was successful in improving educational outcomes for children.

Three factors were identified as crucial to the program's success:
- the existence of a well-defined program model and the support provided through the international arrangements
- the motivation of parents to initially engage with the program, combined with sufficient family stability to make the substantial commitment of time and energy required
- the abilities and commitment of the two HIPPY Coordinators. They held the program together in the difficult establishment phase, at the different levels of planning, in training home tutors and responding to the needs of a linguistically and culturally diverse group of disadvantaged families.

The research shows that HIPPY can be considered a high quality intervention with demonstrated short-term benefits, especially for those who completed the full two years of the program. It fits well with the general features of good quality early childhood programs.

# Introduction

> *Well, the drawings, how to paint and how to draw, how to cut things, reading because I was reading to him all the time, and the memorising. I read the books to him and he has to memorise sometimes. I say 'Do you remember such and such?' and he says 'Yes I remember', and you have cards and you cover them and he has to match them, he was doing quite well with those.* (Spanish-speaking father in HIPPY)

> *Well [HIPPY helped] with her language and her drawing. There was a continuation. She learnt English from the program and then she goes to school and speaks English and learns English there because we are not able to help her a lot at home [with English].* (Cantonese-speaking mother in HIPPY)

> *I think my daughter has matured very well since she has started the program. She's better than other students. She's able to listen to the teacher, she's able to concentrate. She doesn't act like a baby, she's more prepared than other students, while others her age, under five years old, still you know they are attached to mothers and they feel emotional and cry. My daughter understands the value of education. She has a strong passion to study.* (Somali-speaking mother and home tutor in HIPPY)

## Background

> The full vision of the [United Nations] Education for All, that of a learning society, recognizes the role of parents, families and communities as the child's first teachers. Both learning and teaching begin at birth and continue throughout life, as individuals work, live and communicate ideas and values by word and example (UNESCO 1996, p. 4).

This paper reports the evaluation of the implementation of the Home Instruction Program for Preschool Youngsters (HIPPY) with 33 families in inner Melbourne in 1999 and 2000 (Gilley 2003). It focuses on core issues and findings; a more detailed report is provided by Gilley (2003).

The HIPPY model was developed in the late 1960s in Israel, and in 2001 was operating in seven countries (National Council of Jewish Women Institute for Innovation in Education, 2001). The model provides parents with information and support to undertake pre-set educational lessons with their four and five-year-old children (Lombard 1994). A major element in the lessons is reading of children's stories. The standard requirement made of parents engaged in the program is that they deliver 60 weeks of lessons over a two-year period, spending at least 15 minutes per day, Monday to Friday, during school term time. According to this ideal model, HIPPY provides for at least 75 hours of parent to child instruction over the two years of the program.

Parents are assisted through a fortnightly visit from a home tutor who has been trained to deliver the lesson through the use of role play. On alternate weeks, parents are invited to meet with other parents and their home tutor both to practise delivering the weekly lessons to their children and to undertake other enrichment activities decided upon by the group. The home tutor is usually selected from amongst families participating in the program and attends a weekly training program with the coordinator.

## This study

The impetus for this study came from several sources. This study was part of a research plan devised by Victoria University (Dean, Leung & Gilley 2003). An explicit commitment to program evaluation was part of the Brotherhood of St Laurence's original adoption of the program, in order to establish whether the program model could be successfully implemented in Australian

conditions. In addition, in line with the organisation's anti-poverty mission, new programs such as HIPPY had to have potential to contribute to broader social change, in this case through possible expansion of the program and dissemination of research evaluation findings.

As for all HIPPY programs, research efforts were also encouraged by the parent body, HIPPY International, though the precise nature of the research has always been left to individual programs to decide. The early engagement of Victoria University in the program's introduction into Australia provided an academic base from which to develop an overall research strategy and specific research projects. Conducting this research study as a university and welfare industry partnership arguably provided the necessary research independence through the academic base, while also providing a process for integrating the research findings into the further development of the program in Australia.

## Research questions

In reviewing the methods of other evaluation studies of early childhood educational programs in general, and HIPPY in particular, it became clear that many studies had focused only on program outcomes. This in effect reduced the educational intervention to the status of a 'black box', leading to 'congratulations all round' when outcomes came out as positive and confusion when neutral or negative outcomes were identified. For the present study, four initial research questions were developed concerned with both process and outcomes, and the relationship between the two:

1.  How was the standardised program implemented?
2.  What were the experiences and views of the direct participants and other stakeholders of the implemented program?
3.  What were the outcomes for children participating in the program, particularly in relation to the program goal of improving school success, as determined by parents, teachers and direct testing?
4.  What were the outcomes for parents participating in the program?

The first research question was examined by reviewing the ideal program model (Lombard, Levy, Marcoshemer, Gerslenfeld & Ginseberg 1999) and then monitoring how it was implemented in practice. This shifted the research from the assumption that all implementations of HIPPY were the same to the view that each implementation might have unique properties. The second research question focused on the views of participants, principally parents, HIPPY staff and local providers of services to young children.

Being family-based, the program's major effects could be expected to be on children who received the program and parents who provided it. This led to the third and fourth research questions. In terms of the impact on children (the third research question), there were two main approaches to data collection. One was to ask parents: as the provider of the program to children, parents could be expected to have the most direct knowledge of what their children learnt through their participation. The other approach examined outcomes in terms of literacy and numeracy skills, school achievement, and teacher assessments of how children were able to work in the school environment (academic self-esteem). The results for children in HIPPY were compared with those of a matched comparison group of children, as a way of assessing whether HIPPY children's skills and achievement levels were likely to be due to involvement in the program.

As HIPPY is centrally concerned with improving children's success at school, effects on parents were not considered in this study as program outcomes in themselves. Elsewhere, effects on parents have been viewed as intermediary outcomes which should be expected in interventions with positive effects for children (Gomby 1999), or as operational goals in HIPPY (Davis & Kugelmas 1974). Accordingly, the interest in the present study was in the extent to which any effects on parents helped explain or confirmed effects on children.

### Additional research questions

Four more detailed questions were further identified, on the basis of both a review of the HIPPY literature and the particular circumstances of the operation of HIPPY in this implementation.

5. Is HIPPY only successful for some groups of educationally disadvantaged families, whilst being unsuccessful for others?
6. What are the implications of providing HIPPY programs in the multicultural context of Australia?
7. What are the implications of running the second year of HIPPY in the child's first year of schooling?
8. What are the lessons for future evaluations of HIPPY in Australia?

In relation to the research question 5, the literature indicated high attrition rates for home visiting programs generally (Daro & Harding 1999), and in some implementations of HIPPY (Adams, Skuy & Fridjohn 1992; Barhava-Monteith, Harre & Field 1999). It was clear that HIPPY was likely to engage with some families but not others. Any light which could be shed on this question would be of assistance both for better targeting of participants in future implementations of HIPPY and for determining adaptations of the program to engage families for whom it would normally fail.

The extent to which any HIPPY implementation can be adapted to the range of language and cultural groups in Australia has important implications for its future usefulness in this country (research question 6).

Running the second year of HIPPY in the first year of children's formal schooling was a distinctive feature of the Australian implementation. The implications of this adaptation (research question 7) were considered important for the future of the program in Australia.

There was ongoing interest from the Brotherhood of St Laurence and Victoria University in the part that evaluation might play in the future of HIPPY in Australia (research question 8).

# Research method

The research method in this study was based on the principle of triangulation; a process in which information is gathered from more than one source to attempt to answer a research question (Miles & Huberman 1994). Miles and Huberman also described triangulation as a way of increasing the certainty of findings by showing that various independent measures agree with a given finding, and as validating of a finding through subjecting it to a series of imperfect measures. Three approaches to data collected were undertaken: participant observation, interviews with stakeholders and assessment of children.

These three approaches are described below, followed by a timetable of the data collection.

## Participant observation

Participant observation involved what Guba and Lincoln (1989) have called prolonged engagement; a process by which sufficient contact is made to ensure in-depth knowledge of a program's operation.

The researcher maintained a diary which combined a description of events and observations. Key elements observed were (presented in descending order of the amount of time involved):
- attendance at coordinator/ home tutor training sessions (10 sessions over the two-year period)
- attendance at eight group meetings of parents
- attendance at four home tutor-parent sessions and four parent–child sessions
- informal discussions with staff and occasionally parents at the HIPPY centre in inner Melbourne

- attendance at social occasions with parents, including excursions and HIPPY graduation ceremonies for children
- informal discussions with teachers about children's progress.

## Interviews with stakeholders

Including stakeholder perspectives in evaluation research recognises that different actors in the program are well placed to describe program processes and can also provide important insights on the effects of the processes used. Such stakeholder groups have different legitimate interests, which may affect their perspective.

Stakeholders interviewed formed three main groups: staff of the organisation providing the HIPPY program, parents of HIPPY children, and other early childhood service providers and school staff.

HIPPY staff interviewed comprised three volunteers, the home tutors, two coordinators, the coordinators' line manager and the Director of Community Services who was responsible for overall management of community service programs in the Brotherhood of St Laurence (including HIPPY).

All but two parents of children in HIPPY were interviewed (= 31 parents). One was unable to be contacted and one was unavailable. The unavailable parent was not involved in the program and it was her sister who delivered the program to her nephew as well as to her own son.

Interviews with other stakeholders consisted of staff at two Fitzroy primary schools and two preschools, a Fitzroy maternal and child health nurse, and the head of the private business that funded this implementation of HIPPY.

## Assessing children's abilities

A key component was the use of a comparison group of families matched on children's age, parental educational level and coming from a non-English speaking background.

Assessment involved:
- direct testing of the 33 children in HIPPY, and a comparison group of 33 children, matched on educational level and ethnic background (where possible), in both their first and second years of school
- teacher assessment of the children in HIPPY and comparison groups, in both their first and second year of school.

Nine assessments were made of children's abilities. Four were administered by the researcher and five were teacher assessments. The assessments were scheduled in the first year of schooling (halfway through the second year of HIPPY) and in the second year of schooling (six months after the completion of the two-year HIPPY program). The areas tested include general development, literacy, numeracy, academic self-esteem and school readiness. The research instruments, and the timing of their administration, are summarised in Table 1:

## Timetable of data collection

The timetable of data collection is provided in Table 2 below.

The main criterion for selecting instruments was that the content was relevant to school progress. Assessments with Australian norms were preferred. Testing was to be kept to the minimum necessary to address the research questions, with time spent with students averaging about 20 minutes per student in visits to schools in 2000 and 2001. Descriptions of all these research instruments are provided in Appendix 1

**Table 1: Nine assessments of children in 2000 and 2001**

| Assessment tool | Administered by | Timing |
|---|---|---|
| **First round assessments** | | |
| Who am I? | Researcher | mid-2000 |
| Literacy Baseline Test | Researcher | mid-2000 |
| Behavioural Academic Self-Esteem (BASE) rating scale | Classroom teacher | mid-2000 |
| ACER Teacher Assessment of Progress in Reading | Classroom teacher | mid-2000 |
| | | |
| **Second round assessments** | | |
| Primary Reading Test | Researcher | mid-2001 |
| I can do maths … | Researcher | mid-2001 |
| Behavioural Academic Self-Esteem (BASE) rating scale | Classroom teacher | mid-2001 |
| ACER Teacher Assessment of Progress in Reading | Classroom teacher | mid-2001 |
| Gumpel Readiness Inventory | Classroom teacher | mid-2001 |

**Table 2: Data collection timetable**

| Type of data collection | Number of observations/ participants | Date of collection | | |
|---|---|---|---|---|
| | | **1999** | **2000** | **2001** after completion of program |
| **Participant observation** | | | | |
| Attending in-service training sessions between coordinator and home tutors | 10 | May–November | March–October | |
| Attending group discussions with parents in HIPPY group | 8 | August–December | May–December | |
| Observation of home tutor/parent sessions and parent/child sessions with families | 4 | | May/June | |
| **Interviews with stakeholders** | | | | |
| Interviews with parents of children enrolled in HIPPY[1] | 30 | | November–December | February |
| Informal discussions with parents of children in comparison group | 33 | November–December | February–December | February–June |
| Interviews with Line Manager and Coordinators of HIPPY | 5 | August–November | May–November | |
| Interviews with home tutors[2] | 8 | October–November | | |
| Interviews with other stakeholders | 12 | May–December | | |
| **Assessing children at school** | | | | |
| Direct testing of children by researcher and teacher assessment | 65[3] | | May–July | May–July |

[1] Two parents were not interviewed and there was one set of twins enrolled in HIPPY.

[2] Three home tutors were also interviewed as parents with a child in the program in 2000.

[3] One child enrolled in HIPPY could not be contacted for the second round of assessments in 2000.

## The families and their participation

Following practice for HIPPY in other locations, two main criteria were used to select families for HIPPY: having a child of the right age (four years at intake) and parental education level being Year 12 or less (Lombard et al. 1999). Children needed to have turned four by 30 April (the criterion for entry into four-year-old kindergarten in Victoria (Kirby & Harper 2001)) to enrol in HIPPY, which meant they would also be eligible to attend their first year of school in 2000.

The participation pattern of the 33 children in the HIPPY program is outlined in Table 3.

**Table 3: Participation patterns of families**

| Groupings of participants | Number of children | Group meeting location |
|---|---|---|
| Completed two years | 13 | Fitzroy |
| Completed one year | 13 | Fitzroy |
| Completed one year | 7 | North Melbourne |

[1]Families at the North Melbourne location were only offered the first 12 months of the program.

Half of those in the Fitzroy location only completed about 12 months of the program. The seven families attending the North Melbourne location also completed about 12 months of the program – but over a different time frame (commencing late, in August 1999, and finishing late, in January 2001, but only completing the first year materials – the entire program that was offered to them).

The families in the Fitzroy location came from a range of backgrounds, mainly from South-East Asia, while the families in the North Melbourne location were all from Somalia. In total, families came from 10 countries, with 10 different languages represented. About half the families indicated major problems with the English language and another quarter indicated some difficulties with English.

# Research findings

The main research findings are summarised below, under to the four main research questions and the four additional research questions.

## How was HIPPY implemented?

Examination of program implementation showed that, overall, HIPPY staff closely followed the approaches detailed in the program model (Lombard et al. 1999). These included engagement with local providers of services to this group of families; consistent use of the set materials and activities, purchased from HIPPY in the United States; selection of home tutors from among parents participating in the program; weekly in-house training of home tutors; alternating home visits and group meetings; and use of role play as the method of learning and teaching at all levels.

There was also some adaptation of the program, supporting Lombard's (1994) contention that there was flexibility in the program to respond to local needs. The main illustration of the program's adaptability in the present study related to the inclusion of people from a range of language (and cultural) backgrounds, and the changes made to the program to deal with this. Details of the range of adaptations from the model are provided in Gilley's thesis (2003).

### Language issues

The language approach favoured by HIPPY's founder was the provision of the program in the official language of the country, on the pragmatic basis that this is the language of schools in which children either succeed or fail (Lombard 1994). An alternative approach, used in the Dutch HIPPY experiment, was to translate the program into minority languages (Eldering & Vedder 1993). The approach chosen in the multicultural environment of Melbourne was to provide the program in both

the families' first language (for most families) and English. It was left to the parents and home tutors to decide upon the appropriate mix of languages.

Despite the consequent complexity of language issues, and the difficulties with English for the majority of families, the program was provided in ways which parents reported as working well for them. From parents' and HIPPY staff comments, this was largely due to the use of bilingual home tutors, for four of the language groups, and flexibility in how much of the program was taught in English and how much in the parents' first language. The use of translations and audio tapes of stories augmented this for the two main language groups. For the other language groups, parents and home tutors identified a range of helpful strategies. These included principally the involvement of older children by parents, but also occasionally the involvement of their spouse or friend to assist, having another parent in the program to act as interpreter, the provision of lesson material to the parent prior to the lesson and the use of dictionaries for translation.

From parents' comments and the researcher's observation of four home tutor–parent sessions and four parent–child sessions, the provision of program activity sheets only in English appeared to present no major barriers to engaging in the program for parents, principally because role play made the material easy for parents to understand and repeat with their children even when parents did not understand the English words. The use of role play with other strategies discussed above seems to have assisted the small number of parents with literacy problems in their own language in the program delivery to their children.

## Attrition from HIPPY

Twenty of the 33 children did not complete the full two-year program. These comprised the 13 children and their families who only completed the first year of the program in Fitzroy and the seven families in North Melbourne who were offered a shorter program. For the Fitzroy group, this represents a 50 per cent attrition rate for the two-year program.

The patterns of parents leaving the program had some similarities to those outlined in two United States studies (Baker & Roth 1997). Thus, there was a small group of families who showed an initial interest in the program but who left in the first few weeks (when they actually experienced the time commitment involved) and another group who left after the first 12 months. Two of the reasons for attrition provided in the United States studies were also found in this study. Parents of three children said that the first year of the program had already sufficiently prepared the child for school; other parents left because they moved to another area or had competing study or work commitments. Other reasons for leaving noted in the present study included caring responsibilities for younger children, not being offered a home tutor who spoke their own language, and (for a child attending an Islamic school) long travelling times making the child too tired to do the lessons.

The other major reason for high program attrition identified in other evaluation studies of HIPPY was extreme family disadvantage (Adams et al. 1993; BarHava-Monteith et al. 1999). This was only true in the present study for the one family where the mother and child were the subject of domestic violence.

## Factors affecting implementation of HIPPY

Three factors were identified as particularly important in the success of this implementation of HIPPY. These were:

- the existence of a well-defined program model and the support provided through the international arrangements
- the motivation of parents to initially engage with the program, combined with sufficient family stability to make the substantial commitment of time and energy required
- the abilities and commitment of the two HIPPY home tutors. They held the program together in the difficult establishment phase, at the different levels of planning, in training home tutors and responding to the needs of a linguistically and culturally diverse group of disadvantaged families.

## What were the experiences and views of the direct participants and other stakeholders of the implemented program?

The major stakeholders – parents, program staff and local early childhood educators and other service providers – were very positive about the program. HIPPY emerged as highly relevant to family interest in the child's education and to the mainstream system of early childhood education.

The generally positive views of program implementation might reasonably lead to an expectation that the program would have positive effects for children and parents. The research findings are provided below.

## What were the outcomes for children participating in the program?

### Parents' views

Parents responded to an open-ended question about what their children learnt through HIPPY. Parental comments are shown in Table 4. As most parents made multiple comments, the number of responses exceeds the number of participants.

In summary, parents reported that their children had made gains which they believed had helped them at school. These gains were concentrated in the areas of specific HIPPY activities, literacy development and an improved orientation towards learning.

**Table 4: Parental statements of gains made by children through HIPPY**

| Category of gains | Number of responses* |
|---|---|
| **HIPPY materials/activities specific** | |
| Colours, colouring in pictures | 15 |
| Identifying shapes (for example, circles and triangles) | 7 |
| Drawing | 6 |
| Using same and different (concepts) | 4 |
| Painting | 3 |
| Cutting out of shapes and figures | 3 |
| Spatial concepts (for example, behind and under) | 2 |
| Puzzles | 1 |
| Animal names | 1 |
| How to hold a pen | 1 |
| Patterns | 1 |
| **Subtotal** | **44** |
| | |
| **Literacy related** | |
| English | 19 |
| Reading | 10 |
| Writing | 5 |
| Comprehension of stories | 3 |
| Literacy | 1 |
| **Subtotal** | **38** |
| | |
| **Orientation to learning** | |
| Increased self confidence in learning | 5 |
| More interested in learning | 3 |
| Listens better | 3 |
| Improved memory | 3 |
| More inquisitive | 1 |
| Harder working, more patient | 1 |
| Able to concentrate | 1 |
| More interested in reading | 1 |
| Completes tasks | 1 |
| Does homework | 1 |
| **Subtotal** | **20** |
| | |
| **Mathematics related** | |
| Numbers | 2 |
| Counting | 2 |
| Mathematics | 1 |
| **Subtotal** | **5** |
| **Total comments** | **109** |

* Number of children = 32, as one parent was not available for interview.


## Ability scores

Outcomes for children were also assessed by comparing various ability and self-esteem scores of children in HIPPY with those in a matched group of children. It could reasonably be expected that if the program had been effective for this intake of children into HIPPY they would score more highly than children in the comparison group on the assessment measures used.

The statistical significance of differences in mean scores between children in the HIPPY Group (HG) and comparison group (CG) was tested, using the independent samples t-test. The dependent variables were the scores on the assessments and the independent variable was group identity

(comparison group or HIPPY Group). Table 5 presents the results of this analysis, and indicates whether the assessment was conducted in the first year (2000), or second year (2001), of children's schooling.

**Table 5: Comparison of mean scores on assessments administered**

| Assessment tool | Number | Mean | Standard Deviation |
|---|---|---|---|
| **First round assessments (2000)** | | | |
| Who am I? | HG (33) | 34.0* | 5.0 |
| | CG (33) | 30.9 | 4.4 |
| Literacy Baseline Test | HG (33) | 18.6* | 6.4 |
| | CG (33) | 14.8 | 6.1 |
| Behavioural Academic Self-Esteem (BASE) rating scale | HG (33) | 53.1 | 11.4 |
| | CG (33) | 57.0 | 12.5 |
| ACER Teacher Assessment of Progress in Reading | HG (33) | 19.4* | 7.9 |
| | CG (33) | 13.2 | 8.2 |
| **Second round assessment** | | | |
| Primary Reading Test | HG (32) | 35.8* | 5.5 |
| | CG (33) | 31.0 | 6.2 |
| I can do maths … | HG (32) | 19.2** | 3.7 |
| | CG (33) | 15.4 | 3.7 |
| Behavioural Academic Self-Esteem (BASE) rating scale | HG (32) | 59.5 | 11.1 |
| | CG (33) | 54.5 | 9.7 |
| ACER Teacher Assessment of Progress in Reading | HG (32) | 31.2* | 9.1 |
| | CG (33) | 25.4 | 8.1 |
| Gumpel Readiness Inventory | HG (32) | 12.2* | 4.1 |
| | CG (33) | 10.2 | 3.8 |

* $p < 0.5$  ** $p < 0.01$

With the exception of the Behavioural Academic Self-Esteem (BASE) rating scale, the assessments demonstrated significantly higher scores for children in the HG than for children in the CG in both the first and second round of assessments – that is, both during the second year of HIPPY and in the year after the conclusion of HIPPY.

These results suggest that the HIPPY program was effective in improving self-esteem and educational attainment. It is also possible that children in the HIPPY group were more advanced than the control group when they entered the program.

Given the goal of HIPPY to improve the educational prospect of disadvantaged children, comparisons were made using independent sample t-tests to test the significance of differences in means between the HIPPY group (HG) and the Australian studies population group (AS); or between the control group (CG) and the population group. The results are provided in Table 6.

**Table 6: Comparison of mean scores on nine assessments with scores from other Australian studies (AS)+**

| Assessment tool | Mean age on assessment | Number | Mean | Standard Deviation |
|---|---|---|---|---|
| **First round assessments** | | | | |
| Who am I? | 5y8m | HG (33) | 34.0 | 5.0 |
| | 5y6m | CG (33)*** | 30.9 | 4.4 |
| | 5y11m | AS (241) | 33.7 | 4.4 |
| Literacy Baseline Test | 5y8m | HG (33)*** | 18.6 | 6.4 |
| | 5y6m | CG (33)*** | 14.8 | 6.1 |
| | 5y9m | AS (898) | 27.5 | 7.8 |
| Behavioural Academic Self-Esteem (BASE) rating scale | 5y8m | HG (33) | 53.1 | 11.4 |
| | 5y6m | CG (33) | 57.0 | 12.5 |
| | multiple | AS (1097) | 56.7 | 11.7 |
| ACER Teacher Assessment of Progress in Reading | 5y8m | HG (33)*** | 19.4 | 7.9 |
| | 5y6m | CG (33)*** | 13.2 | 8.2 |
| | 6y2m | AS (1240) | 26.5 | 8.3 |
| **Second round assessments** | | | | |
| Primary Reading Test | 6y7m | HG (32) | 35.8 | 5.5 |
| | 6y6m | CG (33)* | 31.0 | 6.2 |
| | 6y2m–6y7m | AS (312) | 35.0 | 8.6 |
| I can do maths … | 6y7m | HG (32) | 19.2 | 3.7 |
| | 6y6m | CG (33)*** | 15.4 | 3.7 |
| | 6y9m | AS (910) | 20.4 | 3.6 |
| Behavioural Academic Self-Esteem (BASE) rating scale | 6y7m | HG (32) | 59.5 | 11.1 |
| | 6y6m | CG (33) | 54.5 | 9.7 |
| | multiple | AS (1066) | 57.6 | 11.7 |
| ACER Teacher Assessment of Progress in Reading | 6y7m | HG (32)*** | 31.2 | 9.1 |
| | 6y6m | CG (33)*** | 25.4 | 8.1 |
| | 7y2m | AS (1067) | 35.7 | 8.2 |
| Gumpel Readiness Inventory | 6y7m | HG (32) | 12.2 | 4.1 |
| | 6y6m | CG (33) | 10.2* | 3.8 |
| | 6y7m | AS (115) | 11.8 | 4.4 |

*$p < 0.05$ *** $p<0.001$ when compared with Australian studies group.
+ Sources for the Australian study scores: Who am I? (de Lemos & Doig 1999), Literacy Baseline Test (de Lemos 2000), Behavioural Academic Self-Esteem (BASE) rating scale (de Lemos, 1999), ACER Teacher Assessment of Progress in Reading (ACER unpublished data), Primary Reading Test (de Lemos 1996), I can do maths … (Doig & de Lemos, 2000), Gumpel Readiness Inventory (Moussa, Fan, & Dean 1999)

In the first round of assessments, children in HIPPY were scoring either at a similar level (2 out of 4 measures) or below (2 out of 4 measures) compared with those in other Australian studies. Children in the comparison group scored significantly below these normative scores (3 out of 4 measures). By the second round of assessments, there was a clear trend for children in HIPPY to reach similar scores to those established in Australian studies (4 out of 5 measures) whereas children in the comparison group continued to have significantly lower scores (4 out of 5 measures).

These results suggest the higher scores for HIPPY children compared with the control group were a result of the program intervention rather than of higher levels of attainment before starting the program.

## What were the outcomes for parents participating in the program?

Parents reported learning some skills, especially in English, though these gains tended to be minor except where the parents were also home tutors in the program. The two major changes reported by parents were an improved, usually closer relationship with the HIPPY child and an increased engagement with their child's education. The latter gain sometimes included improved communication with the child's school, but more commonly related to changed expectations and understanding of education in Australia and more direct involvement with the child in his or her learning.

## Is HIPPY more successful for some groups of educationally disadvantaged families than others?

This study has most to say about the suitability of the program to groups from a diverse range of cultures and language. Most other HIPPY programs evaluated in previous research dealt either with people from the dominant language group in the country or from the one minority language group (Lombard, 1994).

Overall, the present study demonstrated that HIPPY has the capacity to be successfully implemented in Australia with families from diverse non-English speaking backgrounds. The three parents delivering the program from English-speaking backgrounds indicated that the program could work for them in a setting where most of the families were from other backgrounds. Program staff, with the active involvement of parents, successfully adapted the basic program model to be relevant to children in families from diverse language and cultural backgrounds. Both parents themselves and local service providers considered parents had high aspirations for their children's education, but prior to HIPPY did not know how to become more involved. The program was seen to be highly relevant to parents' concerns about their children's unmet educational needs.

## What are the implications of providing HIPPY programs in the multi-cultural context of Australia?

Having demonstrated that the program can be successfully delivered in an Australian multicultural context, one might ask what lessons can be taken from the present study. Cultural and language issues are closely linked and need to be seen as two sides of the same coin. Given the strong literacy base of the program, the language needs of parents and children are paramount but cultural sensitivities also need to be taken into account in the process of in-house training and supervision of home tutors who are close to the culture of other families.

Parents and HIPPY staff stressed the importance of employing home tutors who were bilingual. Families whose tutors were not bilingual experienced more difficulties with the program. This suggests that home tutors recruited in any program need to be bilingual in English and a relevant local language. Parents also valued being provided with story books in both English and their own first language, and bilingual audio tapes of the stories, providing another pointer to successful HIPPY implementation in a multicultural context.

## What are the implications of running the second year of the HIPPY program in the child's first year of schooling?

HIPPY was developed as a preschool program in Israel, where children do not start school until they are six years of age (Lombard 1994). The HIPPY materials were designed for four and five-year-olds, based on an understanding of children's general intellectual development. In Australia, this meant that the second year of the program was in the first year of compulsory schooling. As noted earlier, parents of three of the children interpreted the program as a preschool one and felt that the second year was unnecessary.

No significant operational difficulties were noted in the program's operating in the first year of schooling. Thus, apart from one family (noted earlier) who withdrew because of the child's long travelling time to school, parents of the 20 children who undertook HIPPY in their children's first year of schooling reported that children were willing to complete the lessons while attending school.

There was some conflict between doing HIPPY activities and homework, but this was usually minor and easily resolved. A small number of parents commented that the material in the second year was more relevant than the first year, because of similarities with what their children were learning at school. Many of the 13 parents who could not continue after the first year (for example because they moved or had other commitments) said they would like to have had a second year of the program

The repetitive nature of the second year of HIPPY materials and activities lends itself to relatively easily developing one and two year modules of the program or some other combination. The fact that half the families attending the program in the Fitzroy location withdrew after the first year suggests that a one year program may attract some families who would be either unable or unwilling to complete a two-year program (without the stress or guilt of being seen to 'drop out' of the program). That some families found the material too easy or too difficult in the second year also suggests some value in having accelerated or decelerated program modules.

The balance of evidence produced in the present study is, however, in favour of running a two-year program. Children who completed two years, rather than one year of the program, performed better on the researcher and teacher administered assessments. This difference can be attributed to the different length of involvement, possibly due to the consolidation of the skills and conceptual understanding provided in a longer program. This is supported by the research findings from several studies of HIPPY that a higher intensity of involvement in HIPPY is related to more positive results for children (Baker, Piotrkowski & Brooks-Gunn 1999; Eldering & Vedder 1993)

## What are the lessons for future evaluations of HIPPY in Australia?

One of the limitations identified in HIPPY evaluation efforts in other countries to date has been the lack of any systematic approach, since relatively few implementations of HIPPY have been evaluated. At a national level, there are also potential benefits in ensuring that all programs are evaluated within a common framework in terms of the kinds of research questions posed in the present study. Understanding which children and families gain most from HIPPY would allow for improved targeting of families who might take part in the program. Improved knowledge of the relationship between program processes and program outcomes would enable further development and refinement of program implementation.

A common evaluation framework for the program nationally might usefully identify data that all programs could collect without any significant outlay of research resources. This could include the following common elements, collected in a standardised way:

- demographic data on families, to establish what kinds of families the program is attempting to serve
- assessment of the program by parents
- assessments of children's development in terms of initial abilities upon entering the program and abilities both during and at the end of the program
- ongoing monitoring of program implementation processes.

Localised evaluations could assist individual program providers as well as contribute to the development of the program overall. This could usefully include more detailed qualitative data from parents and home tutors, as well as feedback from children's teachers at preschools and schools.

A third level would be to undertake a major national evaluation study when HIPPY numbers across programs are sufficiently high to more clearly define the value of the program. Such a study should be quasi-experimental in nature, and might usefully consider comparison with other intervention programs. As in the present study, it should include different sources of assessments – namely parental, teacher and direct assessment of children – to provide the benefits of triangulation.

The present findings strongly suggest that a major focus in future studies should be on the experiences and views of parents. They are major players and are arguably in the best position to report on lesson implementation and family change due to their participation in the program. They are an important source of information on the value of the program for their children's education. Their experiences and views seem to have been undervalued in most other evaluations of HIPPY.

# Conclusion

In this study, the high degree of concurrence of the three sets of data – gained from participant observation, stakeholder interviews and assessment of children's school performance – means that we can confidently conclude that the HIPPY program had a positive effect on children's learning and self-confidence. Two limitations in the assessment of children's abilities – the lack of pre-testing of children in HIPPY and the comparison group and partial non-matching of the two groups on specific ethnic background – became less crucial than if the study had relied on this data alone.

The present research constitutes a case study of a good quality intervention with demonstrated short-term benefits, especially for those who completed the full two years of the program. It fits well with the general features of good quality early childhood programs. These include starting the program early in the child's life, being intensive over a substantial period of time, having low child–adult ratios, ensuring adequate training and supervision of staff, providing services to both parents and children, empowering parents, and working in partnership with other services (McLoughlin & Nargorcka 2000). HIPPY could be seen as empowering for families on the basis that it engaged parents in their direct interest – their child's education – and used a small group process for articulating and thinking through issues.

In common with other home visiting programs, HIPPY showed a relatively high drop-out rate before completion of the program as offered: 13 out of 26 families (50 per cent) who were offered the two-year program did not last the distance. Nevertheless, HIPPY provided clear benefits for children who participated. The model required parents who were very motivated to help their children to succeed in their education and who had sufficient financial, housing and emotional stability to remain involved. Major benefits for children were linked to a two-year involvement. Family differences in language and culture appeared to present no barrier to success in the program and recent immigration appeared to contribute to parental motivation to participate. Improvements in parent–child relationships, a finding of the present study, have been identified as an indicating that positive program outcomes for children are likely (Gomby 1999).

There were some distinct advantages in bringing in this international model into Australia: the program's well-defined structure, the availability of educational materials and lessons, and the support and practice wisdom provided by the international body. One disadvantage was the inappropriateness of United States based texts, which is being addressed though the involvement of Australian authors.

Critically, there are a number of caveats in considering the longer term viability of HIPPY in Australia. The number of families in this study was small. Even here, over one-third of the families used only about half of the program that was offered, suggesting that two years may demand too great an effort for many families. HIPPY does require a substantial commitment of time and energy from parents and it may never be appropriate for those who lack the emotional, financial and housing stability. This evaluation says nothing about engaging other groupings of less motivated or more disadvantaged parents. Lastly, it is beyond the scope of this research to compare the value of HIPPY with other locally developed educational programs.

A conceptual view of HIPPY was developed, building on the work of Baker et al. (1999) to include the implications of the research findings from this study. This elaborated conceptual framework is provided in Appendix 2.

Bronfenbrenner's (1986; 1991) emphasis on the importance of macro and micro systematic influences, and the influence of period and place, provide an important basis for considering the relevance of the present study results to the future of HIPPY in Australia. It can be expected that the influences identified in this implementation of HIPPY will vary in future implementations. Families with different language and cultural circumstances will become involved in the program,

there will be changes in the provision of other services to families and HIPPY processes will evolve and change. The implementation evaluated in this study has demonstrated its adaptive capacity to the multicultural context of Australia at the beginning of the new century. The test of its future value will be in the sensitivity and relevance with which it is adapted to future change.

# Appendix 1: Research instruments

## First round researcher administered tests in 2000

*Who am I?* is an Australian measure that has been described as a 'manageable, child friendly and reliable assessment of young children's (four to seven years) developmental level' (de Lemos & Doig 1999, p.5). The assessment involves children writing their own name, copying five shapes, writing numbers, words, and a sentence, and drawing a self-picture. It provides three numerical sub-scores: copying, symbols and drawing and a total score out of a possible 44.

This measure was developed for use in the Australian Council of Educational Research Project on Educational Research Curriculum and Organisation in the Early Years of School (de Lemos 1999). Its main purpose is to assess the developmental level of children from age four to age seven. It is based on previous research which has shown that copying skills are associated with general cognitive development and are valid measures of development across different cultural groups.

> The inclusion of measures of spontaneous writing as indicators of developmental level is supported by the research of Ferreiro and Teberosky, that demonstrates the links between children's early attempts at writing and their growing understanding of the way in which spoken words are represented in print. (de Lemos & Doig, 1999, p.5)

The *Literacy Baseline Test* is a British test which assesses literacy levels of children at school entry and is used to 'act as an initial reference point against which subsequent progress can be measured' (Vincent, Crumpler & de la Mare, 1996, p.12). It provides numerical sub scores for phonological awareness, initial sounds and rhymes, literacy concepts, letter names, letter sounds; reading (picture to word, word to picture and sentence to picture), and spelling. It provides a total numerical score out of a possible 38.

## Second round researcher administered tests in 2001

It was decided not to use the second test in the *Literacy Baseline* series to assess children's literacy in the second round of testing in 2001, on advice from the Australian Council of Educational Research (de Lemos, personal communication, 2000) that there was uncertainty whether test results using this assessment were an indication of literacy ability per se, or the ability to interpret the instructions (the children completed the set tasks from written instructions).

Instead, the *Primary Reading Test* (France, 1981) was used. Developed in the United Kingdom as a test of children's development of skills required for reading and writing, it includes 48 items for which children are asked to select the correct word from a group of five possibilities. In the first 16 items a picture is provided of each item. In the present research, all items were administered as a word recognition test, with the researcher speaking the word which the child then attempted to select. It provides a total score out of a possible 48.

*I can do maths …* is an Australian test designed to assess children's development in numeracy, within a context of assessing key learning objectives in the early years of schooling. In level one, used in this research, there are 30 items. To obtain correct answers requires children to write, draw, count and measure (Doig & de Lemos, 2000). It provides a total numerical score out of a possible 30.

## First round teacher assessments in 2000

The *Behavioural Academic Self-esteem* (BASE) rating scale is a United States teacher rating of children's academic self-esteem, based on observation of their classroom behaviour (Coopersmith & Gilberts, 1982). It comprises five subscales assessing initiative, social attention, dealing with success/failure, social attraction and self-confidence. It provides a total score out of a possible 80.

The *Australian Council of Educational Research Teacher Assessment of Progress in Reading* is based on the Western Australian (WA) First Steps Project which was developed by the Education Department in WA. This checklist was developed for use in the Australian Council of Educational Research Evaluation of the Victorian First Steps Pilot Project for the First Three Years of Schooling (de Lemos, 1999), and covers the child's progress in achieving the five phases of literacy development as identified in the WA First Steps program: role play, experimental reading, early reading, transitional reading and independent reading. It provides an overall numerical score out of a possible total of 48.

## Second round teacher assessments in 2001

Repeats of the *Behavioural Academic Self-esteem* (BASE) rating scale and the *ACER Teacher Assessment of Progress in Reading* were conducted by children's Grade 1 teachers.

The *Gumpel Readiness Inventory* (Gumpel, 1999) was developed in Israel as a tool for assessing school readiness of children in association with HIPPY International. It was developed through research conducted mainly with first-grade teachers. In its final form it comprises six items of readiness behaviours with a four-point rating scale for each item, from 0 to 3, ranging from 'never behaves in this way' to 'always behaves in this way'. In research conducted in Israel, it discriminated significantly between children enrolled in HIPPY (more school ready) and children not in HIPPY (less school ready). It provides an overall numerical score out of a possible total of 18.
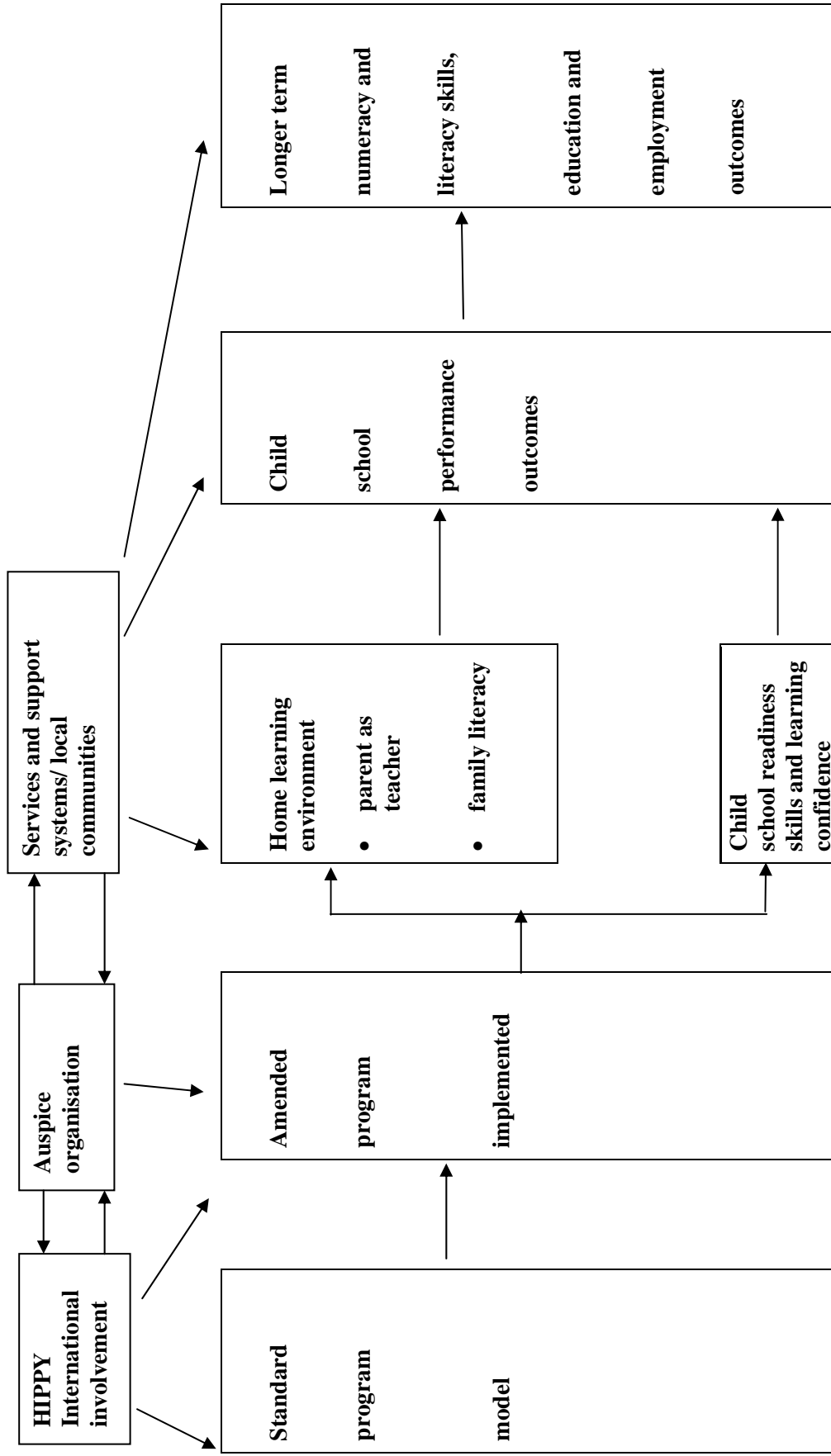
# Appendix 2: Conceptual view of HIPPY

The role of HIPPY is further considered in Figure 1 on the next page. This figure builds on the work of Baker et al. (1999) to include the implications of the research findings from this study.

Viewing Figure 1 from left to right, the model takes its starting point as the standard program model, namely that provided by Lombard et al. (1999). This leads to an amended implementation which may vary considerably from that envisaged in the standard model. As noted earlier, the response to the multi-language context was a major area of adaptation. As with Baker et al.'s (1999) model, participation in the program leads to changes in the family environment and the child learning specific skills, as well as increased confidence in learning, which in turn lead to higher school performance outcomes. Figure 1 then draws upon the evidence from other studies of the link between early school performance to later educational and broader outcomes to complete the causal chain (for example, Travers 2000), although later outcomes were not tested in the present study.

Figure 1 also adds other influences on the program to Baker et al.'s (1999) conceptual model, acknowledging that any implementation of HIPPY is helpfully considered as more than an interaction between a program model and families.

**Figure 1: Elaborated conceptual framework of HIPPY**

HIPPY International involvement

Auspice organisation

Services and support systems/ local communities

Standard program model

Amended program implemented

Home learning environment
- parent as teacher
- family literacy

Child school readiness skills and learning confidence

Child school performance outcomes

Longer term numeracy and literacy skills, education and employment outcomes

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