

# **Follow-up of Children who attended PLAN Preschool Programs in Grade 1**

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Submitted February, 2005

## **Introduction**

The aim of preschool is to prepare children, socially and cognitively, for the demands of formal schooling. Children who attend preschool are required to interact and communicate with other children and adults; they have experience of being away from their family and placed in a classroom situation. They are also introduced to important concepts in core subjects and benefit from the opportunity to play with other children using play and learning materials that may not be available at home. These experiences should smooth the transition to formal schooling. Studies in developing countries have shown that children with preschool experience perform better in Grade 1 compared to children without preschool experience. In Nepal and Myanmar preschool children were more likely to start school, were better equipped socially and academically, had better attendance rates and did better in year end examinations (Save the Children, 2004). In Botswana, Taiwo and Tyolo (2002) interviewed Grade 1 children on key skills relating to Math, English and Science - expert teachers rated their performance. They found that children who had attended preschools significantly outperformed those who had not.

The objective of this research was evaluate whether children in Grade 1 who had attended PLAN preschools performed better, according to teacher ratings of children's academic performance, work habits and social behaviour, than children who did not have preschool experience.

## **Method**

### Study Design, Sample & Recruitment:

The design was a cross sectional comparison of children in Grade 1 who had attended PLAN preschools and children who had not attended preschool. Children who participated in the original evaluation of the PLAN Preschool Program in 2003 were followed up at the end of Grade 1, their first year of formal schooling. For each child that had attended a PLAN preschool, a control child of the same sex was selected randomly by the researchers from the class register. They simply chose the next name on the register of a child who had not attended preschool. Of the original 217 children assessed in 2003, follow-up data were obtained on 105 children (48%); Gazipur = 41; Chirirbandor = 34; Jaldhaka = 30). The most common reasons for not being able to obtain follow-up data were that the children were attending a non-government school, that the teacher did not know the child or they had "dropped out" or they were still in preschool. Follow-up data were also limited in some cases by the lack of control children, i.e. there were not enough children in the class who had not attended a preschool. Children were recruited from a total of twenty-three primary schools. The mean age of

the overall sample was 85 months, with a range between 72(6 years) – 106 (8.8 years) months. There was no significant difference in mean age between preschool and control children but the majority of the youngest children (72-79) were former preschool children (preschool=26; control=15). Data was collected by six experienced research assistants with university degrees in November 2004, after the children had been in Grade 1 for 11 months. Consent was obtained from mothers on behalf of their children. All mothers agreed to participate.

### Measure:

Grade 1 teachers were interviewed about the performance of each child. They were asked to report on the children's academic performance, their work habits and social behavior. These questions were adapted for the cultural context of Bangladesh, from a similar measure used elsewhere (e.g. North America). For their academic performance teachers were asked about their abilities on 4 subjects; Bangla, English, Maths and Science. For children's work habits, teachers were asked about whether children were attentive to instructions, whether they obeyed rules / requests and whether they were actively involved in learning. Children's social behaviour was assessed from questions about whether they showed respect, confidence, took responsibility, were self controlled and whether they were aggressive (reverse scored). Teachers rated each characteristic on a scale from 1-5, where 1 was 'poor', 3 was 'satisfactory' and 5 was 'excellent'. A small pilot study indicated that teachers in Bangladesh valued these behavioural characteristics and were confident in their ability to rate them on a 1-5 scale. Teachers were also asked to state how many days each child had been absent from school in the past month.

## **Results**

Table 1 shows the means and t values comparing teacher ratings of control and preschool children. Preschool children are rated significantly higher than control children for academic performance. As more of the youngest children are from preschool, and there is a significant negative correlation between age and academic performance, this difference is no longer significant if the youngest children are excluded (72-79 months). Preschool children were also rated significantly higher by teachers on work habits compared to children who did not attend preschool. For social behaviour, the preschool children obtained slightly higher ratings for each item, but this did not reach statistical significance. There was also no significant difference between the groups on attendance data.

Table 1. Means and t values comparing teacher ratings of grade 1 children who have attended a PLAN pre-school and control children who did not attend any preschool.

	Control Children	Preschool Children	t(208)	p
<u>Academic Performance (Total)</u>	2.67	3.07	2.55	.01
Bangla	2.56	3.05		
English	2.57	2.89		
Maths	2.75	3.12		
Science	2.79	3.22		
<u>Work Habits (Total)</u>	3.24	3.58	2.44	.02
Attentive to instructions	3.20	3.50		
Obeys request /rules	3.42	3.73		
Actively involved in learning	3.10	3.50		
<u>Social Behaviour (Total)</u>	3.53	3.66	1.17	ns
Respect	4.13	4.29		
Cooperation	3.66	3.84		
Aggressive	3.42	3.34		
Confidence	3.15	3.26		
Takes responsibility	3.50	3.68		
Self Control	3.30	3.55		
Number of Days Absent (past month)	4.01	3.21	1.49	ns

Additional analyses were conducted to examine whether one sex benefited more than the other from attending preschool. The only difference observed was amongst preschool children for academic performance - girls obtained significantly higher ratings than boys,  $t(103) = 2.19, p=.03^*$ .

### Conclusions

Results show that according to teacher ratings, children attending PLAN preschool do better academically compared to children who have not had preschool experience. They also show significantly better work habits but there is no difference on social behaviour or attendance rates. The fact that preschool children did not receive higher ratings on all measures indicates that teachers are not systematically biased towards preschool children in either their teaching or ratings. However, the evidence to support the finding that attendance at PLAN preschools benefits children in Grade 1 would be further strengthened by a comparison of end of year exam results.

## References

Save the Children (2003). What's the Difference? An ECD Impact Study from Nepal. Summary of key findings regarding the impact of participation in ECD programs on school enrolment, achievement and retention.

Taiwo, A.A. & Tylo, J.B. (2002). The effect of pre-school education on academic performance in primary school: a case study of grade one pupils in Botswana. *International Journal of Educational Development*, 22, 169-180.