



Speech and Language Baseline Measures
Blurton Sure Start

November and December 2005



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1) Executive Summary

The second assessment of the speech and language ability of children in the Blurton Sure Start area has demonstrated that the target of a 5 percentage point reduction in children requiring specialist intervention has been achieved.

The key findings are:

- An improvement, by 20 percentage points, of children with comprehension and word finding delay within normal limits has been achieved.
- 58% of children in 2005 have language ability within normal limits, compared to 38% in 2002.
- Contact with Sure Start can help to reduce the incidence of comprehension and word finding delay in children.
- A lower incidence of comprehension and word finding delay is found amongst children who have had contact with Sure Start.

Blurton Sure Start should feel proud of the gains that have been made and continue to work towards further reducing the incidence of comprehension and word finding delay in children.

2) Introduction

In the year 2000 Sure Start set a national target to reduce, by 5 percentage points, by 2004, the number of children with speech and language problems requiring specialist intervention.

The drive behind reducing the number of children requiring specialist intervention from Speech and Language Therapists is to raise educational and social aspirations and abilities of children.

In Stoke-on-Trent the initial survey was carried out in the Stoke North Sure Start Area in 2001. This survey was used as a model for all those in Stoke-on-Trent which took place after it. The first Speech and Language Baseline Measures Survey in the Blurton Sure Start area was conducted in 2002. In 2005 this was repeated to establish if there had been a reduction in the number of children requiring specialist intervention.

It had been recognised, by 2000, that there was an underlying 10% of children who had a need for speech and language therapy (Law, 2000) due to genetic or medical issues. This is significant as it establishes a minimum level of children who would be requiring specialist intervention.

Also of concern in Stoke-on-Trent is the high level of deprivation. That is, Locke and Peers (2002) demonstrated that children from an economically deprived background could be at considerable risk of language delay. This is significant for Stoke-on-Trent which, in 2004, was ranked as the 18th most deprived local authority out of 354, nationally (Office for National Statistics).

The consequences of Law's and Locke and Peers' work for the Blurton Sure Start Speech and Language Baseline Measure are enormous. That is, the closer the number of children who are within normal limits is to 90% the better the support and assistance given to children is. This is important given that the 2002 figure for children who were within normal limits for comprehension and word finding ability was 38%. This means that if an improvement to 43% of children within normal limits for either comprehension or word finding delay in the Blurton Sure Start area is gained then the programme has achieved a 5 percentage point improvement.

The 2005 survey was carried out in three settings: Sutherland Primary, Newstead Primary and Blurton Primary. These were the same three settings that were assessed in 2002. This will allow a direct comparison between the two assessments to be conducted.

3) Assessment Methods

The assessment methodology was consistent in each of the four settings.

All assessments were carried out on children aged no younger than three years and six months and no older than four years. The assessments were carried out on children who:

- Lived in the Blurton Sure Start Programme geographical area, and
- Attended a nursery setting that fell in the geographical footprint of the Blurton Sure Start Programme.

Parental permission was gained for all children who took part in the surveys.

The surveys were all carried out in the first term of the academic year. This is because it is suspected that spending time in a nursery setting helps a child to develop speech and language ability (Cooper, 2002).

Two tests were used to assess the language ability of children:

- The Reynell Developmental Language Scales 3 Comprehension scale was used to assess comprehension levels.
- The Renfrew Word Finding Vocabulary Scale was used to assess vocabulary levels.

These tests are able to assess a child's ability to understand language and look at expressive vocabulary.

The Reynell Developmental Language Scales 3 Comprehension scale and Renfrew Word Finding Vocabulary Scale were used in the initial baseline study in 2002. This means that the results of the two studies are comparable.

4) Results and Analysis

4.1) Results of 2005 Survey

4.1.1) Anonymity

The results show the findings from each of the three settings without reference to either the school name or children's name. This is to conserve confidentiality.

4.1.2) Setting 1

Setting 1 had an intake of 52 children, of whom 16 fitted the criteria for assessment. Of these fifteen were assessed, one was absent on the day of the test. Of the 15 children assessed, seven were boys and eight were girls. All of the children assessed spoke English as their first language. The results of the assessment are held in Table 1.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified	1 st Language
M1	3;10	3;11 – 4;00	4;01 – 02	WNL	English
F2	3;09	2;10	<3;03	Comprehension & Word Finding	English
F3	3;08	3;09	4;04 – 4;05	WNL	English
F4	Absent on day of test				
M5	Lives out of Blurton Sure Start Area				
F6	3;10	3;10	<3;03	Word Finding	English
M7	3;06	3;11 – 4;00	3;04	WNL	English
M8	3;06	4;11 – 5;05	5;07 – 5;10	WNL	English
M9	3;07	2;10	<3;03	Comprehension & Word Finding	English
F10	3;06	4;03	4;09 – 4;10	WNL	English
F11	3;09	4;04 – 4;05	5;01	WNL	English
F12	3;06	3;07 – 4;09	4;06 – 4;07	WNL	English
F13	3;06	3;03 – 3;06	4;09 – 4;10	WNL	English
M14	3;10	3;09	<3;03	WNL	English
F15	3;06	3;03 – 3;06	<3;03	Word Finding	English
M16	3;09	4;08 – 4;10	4;06	WNL	English
M17	3;07	3;10	3;03	WNL	English

Table 1 – 2005 Survey results from Setting 1

NB

WNL = Within Normal Limits

M = Boy

F = Girl

The results from Setting 1 are summarised in Table 2.

	Number	Percent
Intake assessed	15	29%
Boys	7	47%
Girls	8	53%
Comprehension delay	2	13%
Word Finding delay	2	13%
Comprehension or Word Finding delay	4	27%

Table 2 – Summary of results from Setting 1

4.1.3) Setting 2

Setting 2 had 14 eligible children from an intake of 30. Of these 14 children three were absent on the day of assessment. Of the eleven children assessed six were boys and five were girls. All children spoke English as their first language. Table 3 holds the results from Setting 2.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified	1 st Language
M1	3;08	3;03 – 3;06	<3;03	Word Finding	English
M2	3;07	3;02	<3;03	WNL	English
M3	3;11	3;11 – 4;00	<3;03	Word Finding	English
F4	3;09	4;01 – 4;02	4;06 – 4;07	WNL	English
F5	3;08	3;09	3;11 – 4;01	WNL	English
F6	3;07	3;01	<3;03	Word Finding	English
M7	3;08	3;01	<3;03	Word Finding	English
M8	3;06	3;10	3;03	WNL	English
F9	3;06	2;10	<3;03	Comprehension & Word Finding	English
F10	3;10	3;01	<3;03	Word Finding	English
M11	3;11	4;04 – 4;05	4;03	WNL	English

Table 3 – 2005 Survey results from Setting 2

The summary of the seven children assessed in Setting 2 is held in Table 4.

	Number	Percent
Intake assessed	11	37%
Boys	6	55%
Girls	5	45%
Comprehension delay	1	9%
Word Finding delay	6	55%
Comprehension or Word Finding delay	6	55%

Table 4 – Summary of results from Setting 2

4.1.4) Setting 3

Setting 3 had an intake of 22 children of which eleven matched the criteria for assessment. However, only five consent forms were returned. Of the five children assessed three were girls and two were boys. All children spoke English as their first language. Table 5 holds their results.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified	1 st Language
M1	3;10	3;02	<3;03	WNL	English
F2	3;11	3;02	<3;03	Word Finding	English
F3	3;06	4;04 – 4;05	6;04 – 6;07	WNL	English
M4	3;10	3;11 – 4;00	<3;03	Word Finding	English
F5	3;09	2;11	<3;03	Comprehension & Word Finding	English

Table 5 – 2005 Survey results from Setting 3

Table 6 holds a summary of the results gained from the ten children assessed at Setting 3.

	Number	Percent
Intake assessed	5	23%
Boys	2	40%
Girls	3	60%
Comprehension delay	1	20%
Word Finding delay	2	40%
Comprehension or Word Finding delay	3	60%

Table 6 – Summary of results from Setting 3

4.1.6.1) Analysis

The three settings have different requirements for specialist help. The collective results are held in Table 7.

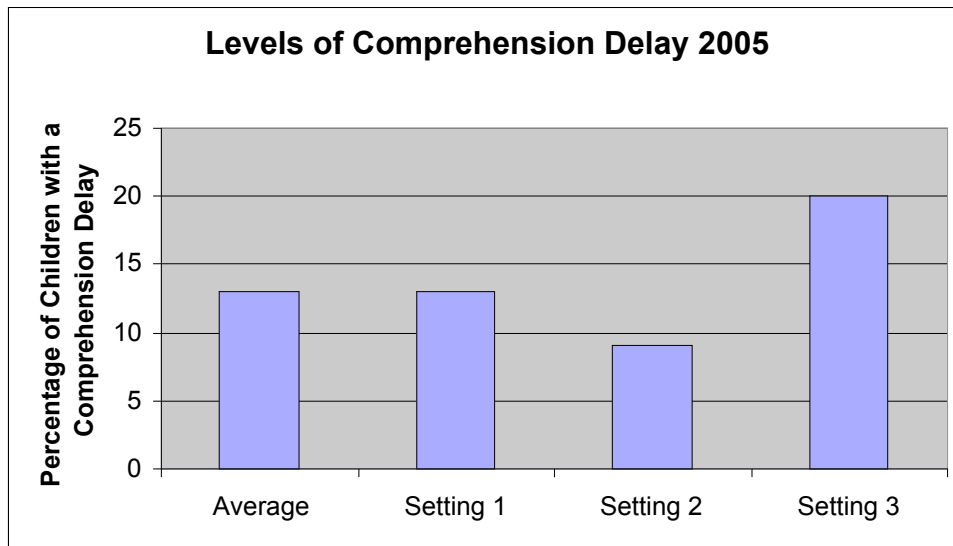
	Number	Percent
Intake assessed	31	30%
Boys	15	48%
Girls	16	52%
Comprehension delay	4	13%
Word Finding delay	10	32%
Comprehension or Word Finding delay	13	42%

Table 7 – Summary of results from all three Settings

Eighteen children were identified as being 'Within Normal Limits'. Of these ten were boys and eight were girls. Within the population this means that 58% of the surveyed children displayed the comprehension and word finding ability that is consistent with their age. These figures also show that 67% of the boys and 50% of the girls were within normal limits.

4.1.6.2) *Comprehension Delay*

Thirteen children were identified as having a comprehension delay. Graph 1 shows how the three settings compare against each other and against the average.



Graph 1 – Levels of Comprehension Delay 2005

The graph shows that one of the settings has the same results as the average, i.e., 13%, and that one setting has a higher than average score and one a lower than average score.

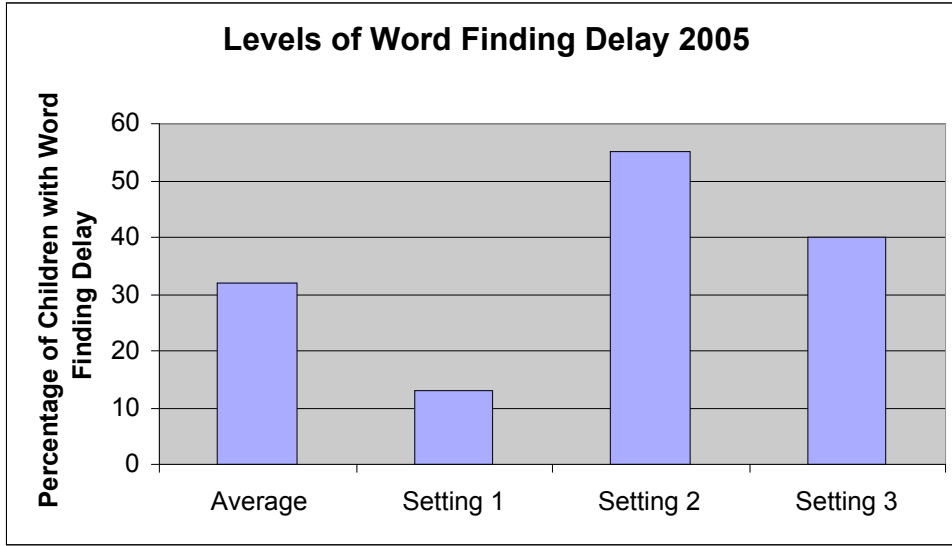
4.1.6.3) *Word Finding Delay*

Word Finding delay was identified in 32% of children. The ten children which were in need of specialist help to increase their word finding ability came from all three settings. Graph 2 shows the levels of word finding delay found.

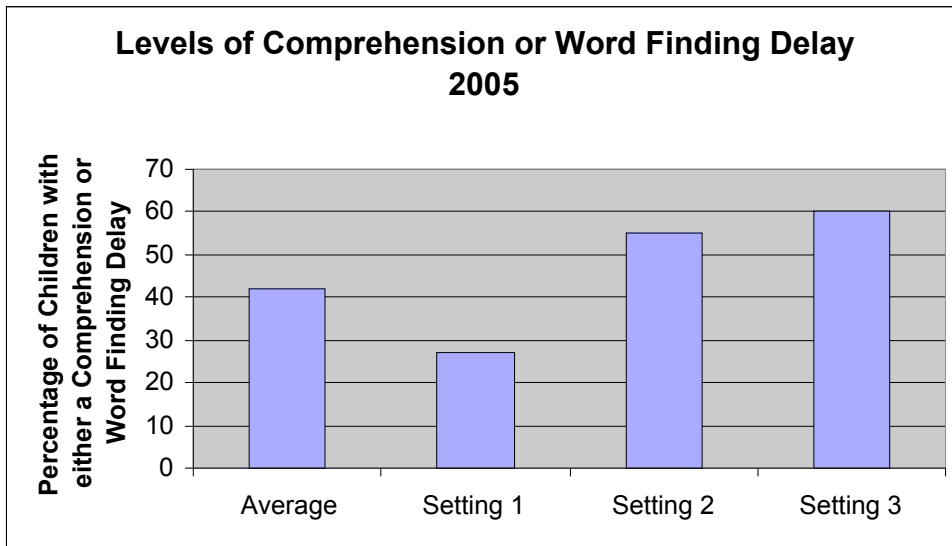
4.1.6.4) *Comprehension or Word Finding Delay*

The level of children with either a comprehension or word finding delay is higher than that for either comprehension or word finding. The percentage of children who had delay was 42%. Graph 3 shows how the three settings compare with the average.

The percentage of children exhibiting either comprehension or word finding delay is higher than for the individual categories. It also shows that the results for Settings 2 and 3 are significantly higher than that for Setting 1.



Graph 2 – Levels of Word Finding Delay 2005



Graph 3 – Levels of Comprehension or Word Finding Delay 2005

4.1.7) Ethnicity

All children assessed spoke English as their first language and came from a White: British background. This means that all children assessed would be compliant with all test procedures.

4.2) Comparison with 2002 Assessment

4.2.1) Analysis

All the settings assessed in 2005 were also assessed in 2002. This allows a comparison to be made between the overall results of 2005 and 2002 and between the individual settings.

Tables 8, 9, and 10 show the summaries of results from the three settings assessed in both 2002 and 2005.

	2002	2005
Intake assessed	20%	29%
Boys	11%	47%
Girls	89%	53%
Comprehension delay	22%	13%
Word Finding delay	67%	13%
Comprehension or Word Finding delay	67%	27%

Table 8 – Summary of results from Setting 1 for 2002 and 2005

Setting 1 has seen improvements in all areas. The greatest improvement has been in Word Finding Delay. The changes have been:

Comprehension Delay	69.2%
Word Finding Delay	515.4%
Comprehension or Word Finding Delay	248.1%

	2002	2005
Intake assessed	29%	37%
Boys	29%	55%
Girls	71%	45%
Comprehension delay	43%	9%
Word Finding delay	86%	55%
Comprehension or Word Finding delay	86%	55%

Table 9 – Summary of results from Setting 2 for 2002 and 2005

Setting 2 has improved results in all areas. The improvements found at Setting 2 have been greatest in comprehension delay where an increase of 477.8% has been achieved. The changes found are:

Comprehension Delay	477.8%
Word Finding Delay	56.4%
Comprehension or Word Finding Delay	56.4%

Setting 3 did not have an overall improvement. The level of comprehension delay remained the same, at 20%, but the incidence of word finding delay increased. This, in turn, brought about an increase in the level of either comprehension or word finding delay. Table 10 shows the results of the comparison.

	2002	2005
Intake assessed	8%	23%
Boys	60%	40%
Girls	40%	60%
Comprehension delay	20%	20%
Word Finding delay	20%	40%
Comprehension or Word Finding delay	20%	60%

Table 10 – Summary of results from Setting 3 for 2002 and 2005

The changes in delay at Setting 3 between 2002 and 2005 are:

Comprehension Delay	0.0%
Word Finding Delay	-50.0%
Comprehension or Word Finding Delay	-66.7%

4.2.2) Summary Comparison

The comparison of individual settings demonstrates changes that have occurred in the delay levels of children at those settings. The important comparison, and the one which Blurton Sure Start will be assessed on, is the figure for the Sure Start area. Table 11 holds the summary information for both surveys.

	2002	2005
Intake assessed	16%	30%
Boys	29%	48%
Girls	71%	52%
Comprehension delay	29%	13%
Word Finding delay	62%	32%
Comprehension or Word Finding delay	62%	42%

Table 11 – Summary of results from all four Settings 2002 and 2005

The changes found between the two assessments are shown below:

Comprehension Delay	223.1%
Word Finding Delay	93.8%
Comprehension or Word Finding Delay	47.6%

4.2.3) Analysis

Eight children were identified as being 'Within Normal Limits' in the 2002 assessment. Of these four were boys and four were girls. Within the population this means that 38% of the surveyed children displayed the comprehension and word finding ability that is consistent with their age. These figures also show that 67% of the boys and 27% of the girls were within normal limits. This result is unusual as it is normal for girls to have better language ability than boys. This 'unusual' result is also found in 2005

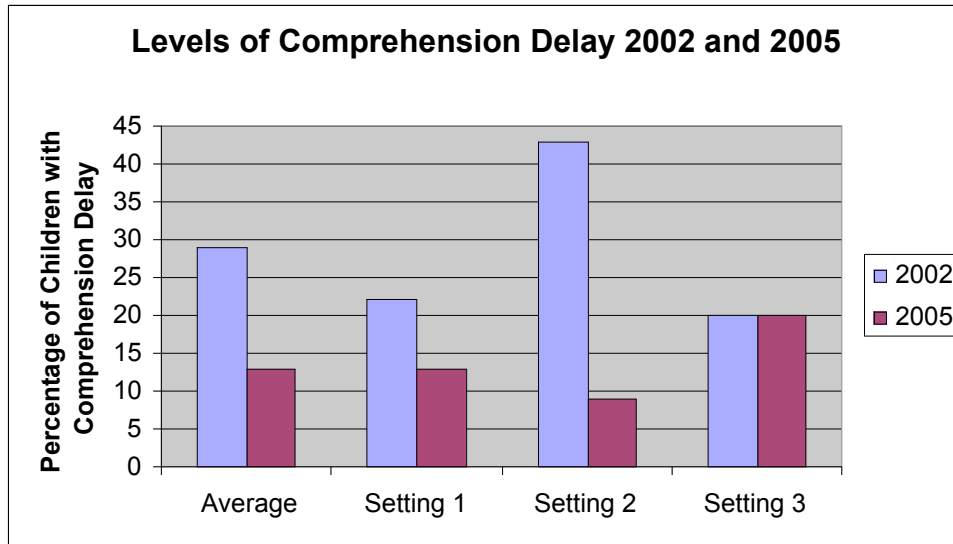
where, again, 67% of boys were within normal limits. The number of girls in 2005 within normal limits has increased to 50% though. This relates to 58% of children being within normal limits in 2005.

The 2005 figure of 58% of children with no demonstrated delay in speech and language represents a 65.5% increase in ability.

4.2.4) *Comprehension Delay*

The difference between the two assessments, in terms of comprehension delay can be seen in Graph 4 which shows the figures from 2002 and 2005.

The graph shows that there has been an overall reduction in the levels of comprehension delay between 2002 and 2005. The only setting that has not achieved a reduction is Setting 3 where the level of comprehension delay remained at 20%.



Graph 4 – Levels of Comprehension Delay 2002 and 2005

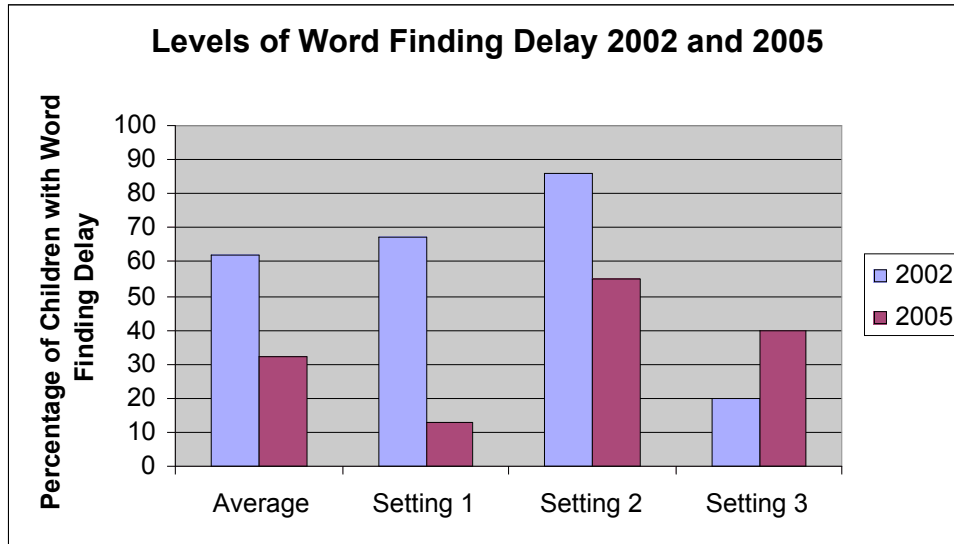
4.2.5) *Word Finding Delay*

There was an overall decrease in word finding delay between 2002 and 2005 by 93.8% from 62% to 32%. Only Setting 3 did not achieve a reduction in word finding delay. Instead, it saw the levels of word finding delay increase from 20% to 40%. Graph 5 shows how the different results compare.

4.2.6) *Comprehension or Word Finding Delay*

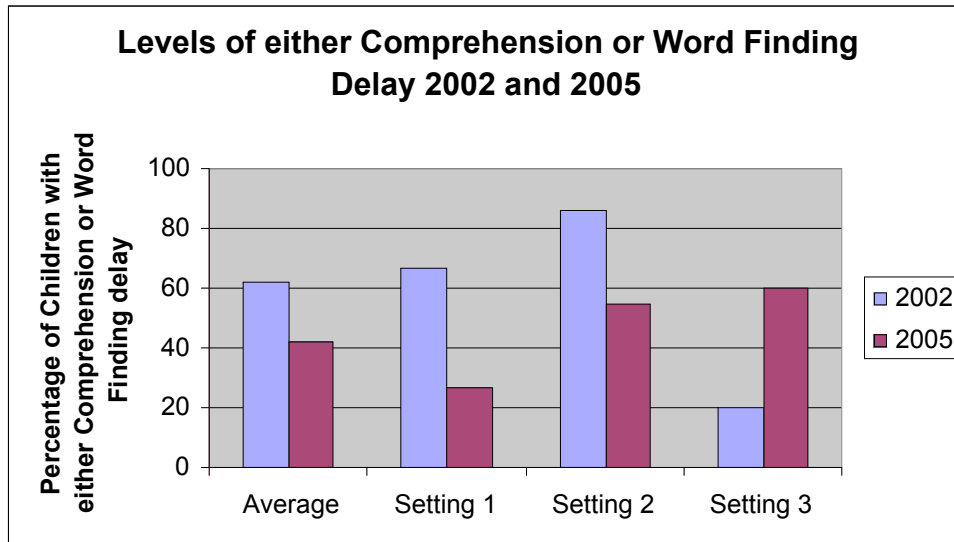
All settings, except Setting 3 have improved levels of either comprehension or word finding delay. The average improvement was 47.6% and the greatest improvement was made by Setting 1 with an improvement of 248.1%. Setting 3 had the worst result with a 66.7% change for the worse

being found between 2002 and 2005. Graph 6 shows the comparison between the results of the two assessments.

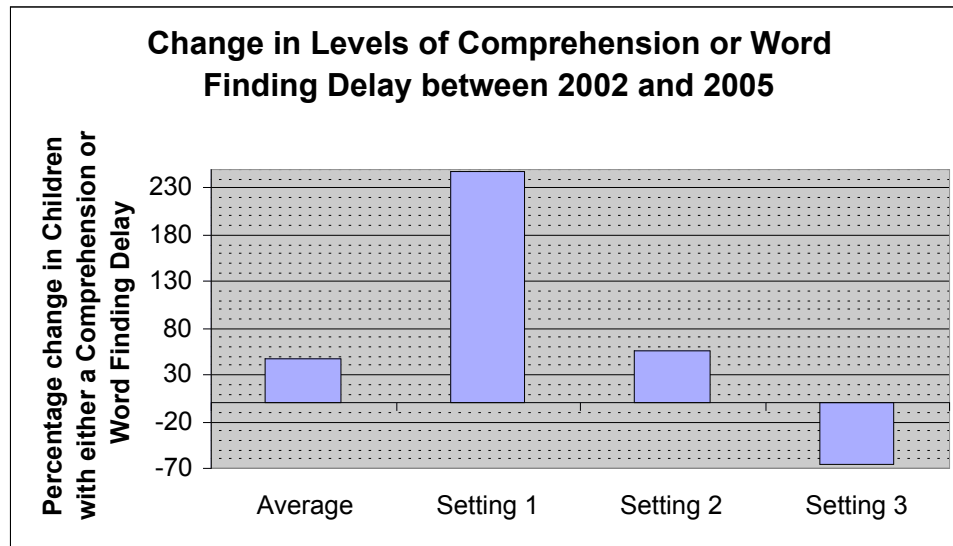


Graph 5 – Levels of Word Finding Delay 2002 and 2005

The difference between the two assessments is shown on Graph 7. It shows that Settings 1 and 2 achieved an increase greater than the 5% improvement targeted. Setting 3 did not achieve the 5% improvement. The average change was in the order of 74.6% which represents 20 percentage points. This achieves the 5 percentage point improvement targeted.



Graph 6 – Levels of either Comprehension or Word Finding Delay 2002 and 2005



Graph 7 - Change in Levels of Comprehension or Word Finding Delay between 2002 and 2005

4.2.7) Sure Start Contacts

After the assessments had been conducted it was decided to establish if the children assessed had been in contact with Blurton Sure Start.

Table 12 holds the results of the investigation. It demonstrates that having contact with Sure Start can reduce the incidence of comprehension or word finding delay.

	Number of Children	Number of Children in contact with Sure Start	Number of contacts with Sure Start	Average contacts per child	Change in Comprehension or Word Finding Delay
Setting 1	15	15	337	22.5	248.1%
Setting 2	11	11	315	28.6	56.4%
Setting 3	5	0	0	0	-66.7%
Average	10	9	217	24.1	47.6%

Table 12 - Number of Sure Start contacts per child in relation to changes in either Comprehension or Word Finding Delay

5) Conclusion

The following conclusions can be made following the analysis of the results gathered in the four assessments of 2002 and 2005.

- There has been a 65.5%, or 20 percentage point, increase from 38% in 2002 to 58% in 2005, in the number of children with comprehension or word finding delay within normal limits in the Blurton Sure Start area. It can, therefore, be said that Blurton Sure Start has achieved its aim of reducing, by 5 percentage points, the number of children requiring specialist speech and language help.
- In 2002 there were significantly more boys than girls with comprehension or word finding delay within normal limits. That is, 67% of boys and 27% of girls. This is an unusual occurrence as it would be expected, normally, for there to be a higher proportion of girls with comprehension or word finding delay within normal limits. In 2005 there were, again, a higher proportion of boys with comprehension and word finding delay within normal limits. That is, 67% for boys and 50% for girls. This shows that there has been a dramatic improvement in girls' ability whilst that for boys in the Blurton Sure Start area has remained static.
- Two of the three settings have evidence of their children having contact with Sure Start. It is noticeable that in Setting 3, where none of the children have had contact with Sure Start, that there has also been an increase in the number of children with either a comprehension or word finding delay.
- Where there has been contact with Sure Start an improvement has been seen. This suggests, therefore, that having contact with Sure Start in the early years can help to improve the comprehension and word finding ability of children.

6) Recommendations

It is recommended that:

- The work begun in the Blurton Sure Start area needs to be maintained so that the improvements that have been gained can be built on.
- Work is needed to improve children's comprehension and word finding ability. This can be done by increasing the stimuli that children are exposed to. By enriching the experiences that children have and then talking about them to embed the vocabulary children should be able to improve both word finding and comprehension ability.
- Blurton Sure Start should continue to have contact with as many children as possible. This is because it has been seen that a high number of contacts with Sure Start can help to reduce the incidence of comprehension and word finding delay.
- The correlation between Sure Start contacts and improvements in the number of children with comprehension or word finding delay is explored further to identify if there is direct relationship; and, if there is share this knowledge and act upon it. Work should also be carried out to identify which types of contact provide most benefit for children.
- The children at Setting 3 are revisited to further explore why their language ability is significantly poorer than children from other settings.
- The assessment is carried out annually to continually monitor the comprehension and word finding ability of children. This is so that changes in ability can be seen every year and tied in with any changes that may occur.

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