



Speech and Language Baseline Measures
Abbey/Bucknall Sure Start

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1) Executive Summary

The second assessment of the speech and language ability of children in the Abbey/Bucknall 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 7 percentage points, of children with comprehension and word finding delay within normal limits has been achieved.
- 45% of children in 2005 have language ability within normal limits, compared to 38% in 2002.
- 75% of settings assessed have seen improvements in language ability.
- 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.

Abbey/Bucknall 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 Abbey/Bucknall 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 Abbey/Bucknall 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 Abbey/Bucknall Sure Start area is gained then the programme has achieved a 5 percentage point improvement.

The 2005 survey was carried out in the same four schools as the 2002 assessment. That is, Abbey Hulton Primary School, Carmountside Primary School, Our Lady and St Benedict Catholic Primary School and Kingsland Nursery School (Townsend Nursery School had a new building and was renamed).

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 Abbey/Bucknall Sure Start Programme geographical area, and
- Attended a nursery settings attached to a school that fell in the geographical footprint of the Abbey/Bucknall 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 four settings without reference to either the school name or children's name. This is to conserve confidentiality.

4.1.2) Setting 1

Setting 1 saw 13 children surveyed from an intake of 24. Of the 13 children surveyed seven were boys and six were girls. All children assessed were of a white-British origin and spoke English as their first language. The results gained from the tests are shown in Table 1.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified
M1	3;08	2;07	<3;03	Comprehension & Word Finding
M2	3;10	2;09	<3;03	Comprehension & Word Finding
F3	3;09	4;01 – 4;02	3;09 – 3;10	WNL
F4	3;09	4;03	3;06	WNL
F5	3;08	3;03 – 3;06	<3;03	Word Finding
F6	3;09	2;10	3;03	Comprehension
M7	3;09	4;01 – 4;02	3;09	WNL
F8	3;06	3;11 – 4;00	4;02 – 4;03	WNL
M9	3;08	2;04	<3;03	Comprehension & Word Finding
M10	3;08	4;04 – 4;05	3;04	WNL
F11	3;10	3;01	<3;03	Word Finding
M12	3;07	3;00	<3;03	WNL
M13	3;10	3;10	<3;03	Comprehension & Word Finding

Table 1 – 2005 Survey results from Setting 1

NB

WNL = Within Normal Limits

M = Boy

F = Girl

Table 2 gives a summary of the results.

	Number	Percent
Intake assessed	13	54%
Boys	7	54%
Girls	6	46%
Comprehension delay	5	38%
Word Finding delay	6	46%
Comprehension or Word Finding delay	7	54%

Table 2 – Summary of results from Setting 1

4.1.3) Setting 2

Setting 2 had an intake of 45 children, of whom 16 fitted all requirements for testing. All children assessed were of a white-British origin and spoke English as their first language. The results from Setting 2 are held in Table 3.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified
M1	3;09	2;05	<3;03	Comprehension & Word Finding
M2	3;11	2;01	<3;03	Comprehension & Word Finding
M3	3;11	3;01	3;01	Comprehension
F4	3;10	4;06 – 4;07	5;02	WNL
M5	3;07	3;00	<3;03	Word Finding
F6	3;06	2;10	<3;03	Comprehension & Word Finding
M7	3;11	3;02	3;09	WNL
F8	3;07	3;00	<3;03	Word Finding
F9	3;06	4;01 – 4;02	4;04 – 4;05	WNL
F10	3;11	4;01 – 4;02	3;06	WNL
M11	3;11	2;11	<3;03	Comprehension
M12	3;06	Would not co-operate		
F13	3;09	Would not co-operate		
M14	3;06	2;11	3;05 – 3;06	Speech
M15	3;09	3;07 – 3;08	<3;03	WNL
F16	3;06	3;00	<3;03	Word Finding and Speech

Table 3 - 2005 Survey results from Setting 2

Two of the children in Setting 2 would not co-operate during the test and so their results are not included in the summary. This means that for Setting 2 the survey is based on 14 not 16 children.

	Number	Percent
Intake assessed	14	31%
Boys	8	57%
Girls	6	43%
Comprehension delay	5	36%
Word Finding delay	6	43%
Comprehension or Word Finding delay	8	57%

Table 4 - Summary of results from Setting 2

4.1.4) Setting 3

Setting 3 had an intake of 22 children. Of these 22 children ten fitted the criteria for assessment. All children assessed were of a white-British origin and spoke English as their first language. Table 5 holds the results.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified
M1	3;07	3;00	<3;03	Word Finding
F2	3;09	4;01 – 4;02	<3;03	Word Finding & Speech
M3	3;11	2;05	<3;03	Comprehension & Word Finding
M4	3;10	3;02	3;05 – 3;06	WNL
M5	3;10	3;01	<3;03	WNL
M6	3;07	3;02	3;07	WNL
F7	3;06	2;10	<3;03	Comprehension & Word Finding
M8	3;06	2;08	<3;03	Comprehension
M9	3;07	3;10	<3;03	Word Finding
M10	3;07	2;04	<3;03	Comprehension & Word Finding

Table 5 - 2005 Survey results from Setting 3

Table 6 gives a summary of the results.

	Number	Percent
Intake assessed	10	45%
Boys	8	80%
Girls	2	20%
Comprehension delay	4	40%
Word Finding delay	6	60%
Comprehension or Word Finding delay	7	70%

Table 6 – Summary of results from Setting 3

4.1.5) Setting 4

Setting 4 had an intake of 14 children. Five of the 14 children in the intake fitted the criteria for assessment. All children assessed were of a white-British origin and spoke English as their first language. Table 7 holds the results.

Child	Actual Age	Reynell Comprehension Age equivalent	Renfrew Word Finding Age equivalent	Delay identified
F1	3;07	4;01 – 4;02	3;03	WNL
M2	3;11	3;07 – 3;08	4;03	WNL
M3	3;10	4;08 – 4;10	5;03 – 5;06	WNL
M4	3;06	2;11	<3;03	Word Finding
M5	3;09	3;01	3;05 – 3;06	WNL

Table 7 - 2005 Survey results from Setting 4

Table 8 gives a summary of the results.

	Number	Percent
Intake assessed	5	36%
Boys	4	80%
Girls	1	20%
Comprehension delay	0	0%
Word Finding delay	1	20%
Comprehension or Word Finding delay	1	20%

Table 8 – Summary of results from Setting 4

4.1.6.1) Analysis

The four settings have differing levels of requirements for specialist help. The collective results for the four settings are held in Table 9.

	Number	Percent
Intake assessed	42	40%
Boys	27	64%
Girls	15	36%
Comprehension delay	14	33%
Word Finding delay	19	45%
Comprehension or Word Finding delay	23	55%

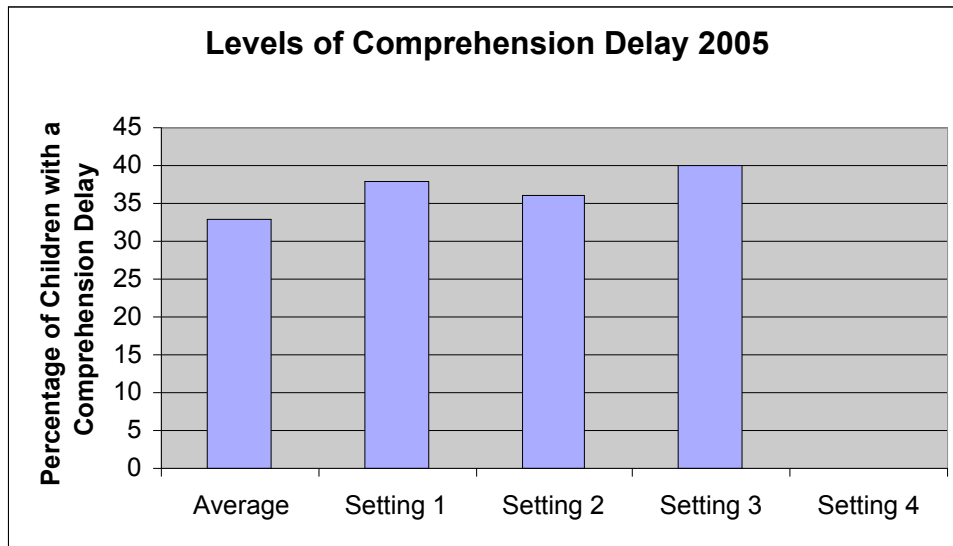
Table 9 – Summary of results from all four Settings

Nineteen children were identified as being 'Within Normal Limits'. Of these twelve were boys and seven were girls. Within the population this means that 45% of the surveyed children displayed the comprehension and word finding ability that is consistent with their age. These figures also show that 44% of the boys and 46% of the girls were within normal limits.

4.1.6.2) Comprehension Delay

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

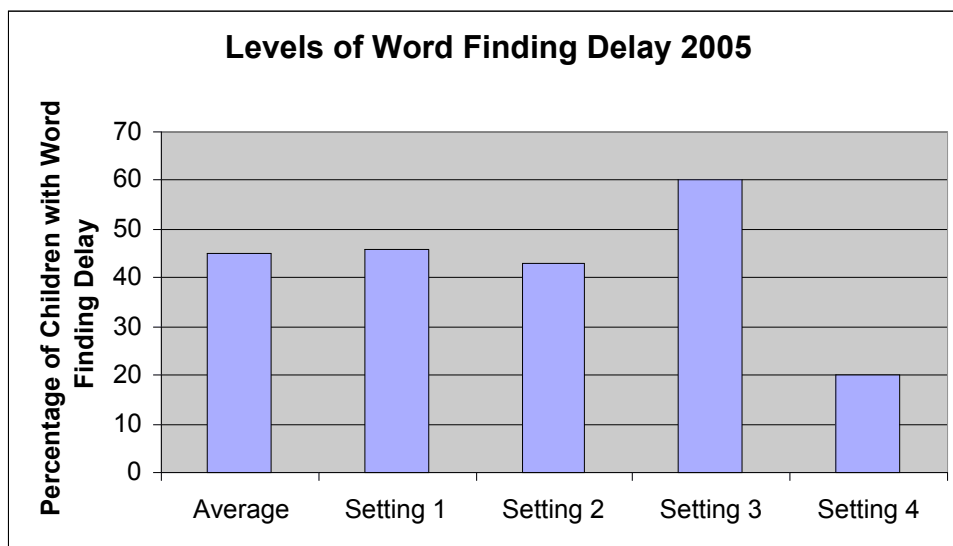
The graph clearly shows that only one setting has below average levels of comprehension delay in the Abbey/Bucknall Sure Start area, that is, Setting 4, which achieved a result of 0%. This means that the results from the other three settings dominate the average calculations. This is to be expected though as Setting 4 only supplied 12% of the children who participated in the assessments. This means that the impact of Setting 4 will be minimised in the results of the other three settings. It does not mean, though, that the good work achieved by the parents of the children in Setting 4 should be ignored.



Graph 1 – Levels of Comprehension Delay 2005

4.1.6.3) Word Finding Delay

Word Finding delay was identified in 45% of children. The 19 children which were in need of specialist help to increase their word finding ability came from all four settings. Graph 2 shows the levels of word finding delay found.

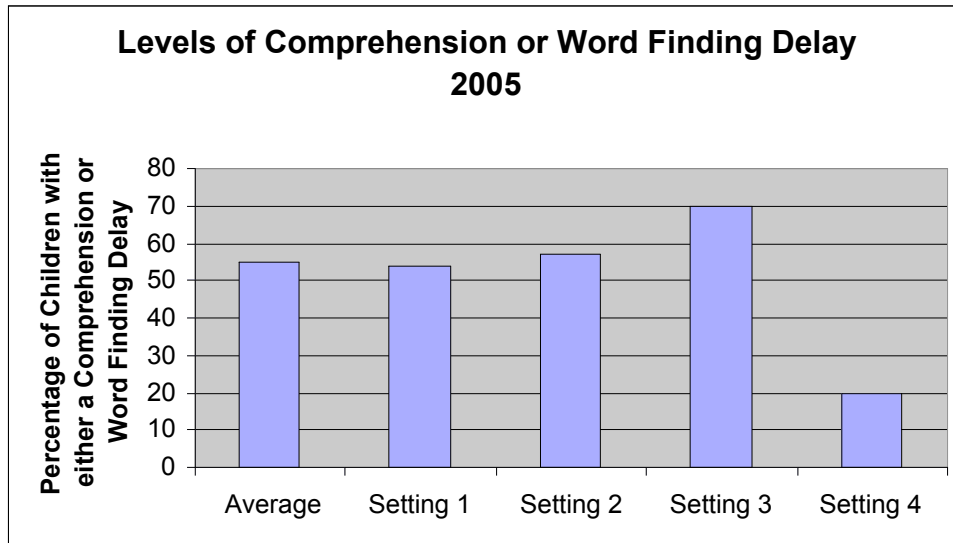


Graph 2 – Levels of Word Finding Delay 2005

The average of 45% for word finding delay hides a low result of 20%, achieved by Setting 4, and a high result of 60%, gained by Setting 3. These results are at extremes with the other two settings receiving scores of 46% and 43% for Settings 1 and 2 respectively.

4.1.6.3) *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 55%. Graph 3 shows how the four settings compare with the average.



Graph 3 – Levels of Comprehension or Word Finding Delay 2005

The percentage of children exhibiting either comprehension or word finding delay is higher than for the individual categories but does follow the same pattern as for word finding delay. That is, Settings 1 and 2 are around the average score; setting 3 is significantly higher than average; and, Setting 4 is significantly lower than average.

4.2) Comparison with 2002 Assessment

4.2.1) Comparison of Settings

The assessment carried out in 2002 was conducted in the same settings and with the same tools as the 2005 assessment. This allows a comparison to take place to determine whether or not there has been an improvement and if so, by how much. This is important as it is necessary to establish whether or not an improvement by five percentage points has been achieved.

Tables 10, 11, 12 and 13 show the summaries of results from all four settings from both 2002 and 2005.

	2002	2005
Intake assessed	62%	40%
Boys	50%	64%
Girls	50%	36%
Comprehension delay	38%	33%
Word Finding delay	56%	45%
Comprehension or Word Finding delay	61%	55%

Table 10 – Summary of results from Setting 1 for 2002 and 2005

Setting 1 has improved in all areas. It has seen improvements of:

Comprehension Delay	13.2%
Word Finding Delay	19.7%
Comprehension or Word Finding Delay	9.9%

	2002	2005
Intake assessed	26%	31%
Boys	50%	57%
Girls	50%	43%
Comprehension delay	33%	36%
Word Finding delay	75%	43%
Comprehension or Word Finding delay	83%	57%

Table 11 – Summary of results from Setting 2 for 2002 and 2005

Setting 2 has improved results in word finding delay and in either comprehension or word finding delay. However, there has been an increase in the percentage of children with comprehension delay. This means that for Setting 2 there have been changes in children's delay of:

Comprehension Delay	-9.1%
Word Finding Delay	42.7%
Comprehension or Word Finding Delay	31.4%

Setting 3 has only improved in the area of comprehension delay. That is, in 2002 43% of children exhibited a delay and in 2005 that figure had fallen to 40%. However, for word finding delay and for either comprehension or word

finding delay there has been an increase in the number of children with delay.

	2002	2005
Intake assessed	28%	45%
Boys	71%	80%
Girls	29%	20%
Comprehension delay	43%	40%
Word Finding delay	29%	60%
Comprehension or Word Finding delay	43%	70%

Table 12 – Summary of results from Setting 3 for 2002 and 2005

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

Comprehension Delay	6.0%
Word Finding Delay	-106.9%
Comprehension or Word Finding Delay	-62.8%

	2002	2005
Intake assessed	36%	36%
Boys	12%	80%
Girls	88%	20%
Comprehension delay	13%	0%
Word Finding delay	25%	20%
Comprehension or Word Finding delay	38%	20%

Table 13 – Summary of results from Setting 4 for 2002 and 2005

Setting 4 has achieved an improvement in all areas. The improvements that have been made are:

Comprehension Delay	100.0%
Word Finding Delay	20.0%
Comprehension or Word Finding Delay	47.4%

Research indicates that for most speech and language disorders boys are more likely to be at risk of difficulties than girls are. The difference between the high percentage of girls in 2002 and the high percentage of boys in 2005 may have influenced the results.

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 Abbey/Bucknall Sure Start will be assessed on, is the figure for the Sure Start area. Table 14 holds the summary information for both surveys.

	2002	2005
Intake assessed	37%	40%
Boys	47%	64%
Girls	53%	36%
Comprehension delay	33%	33%
Word Finding delay	51%	45%
Comprehension or Word Finding delay	60%	55%

Table 14 – Summary of results from all four Settings 2002 and 2005

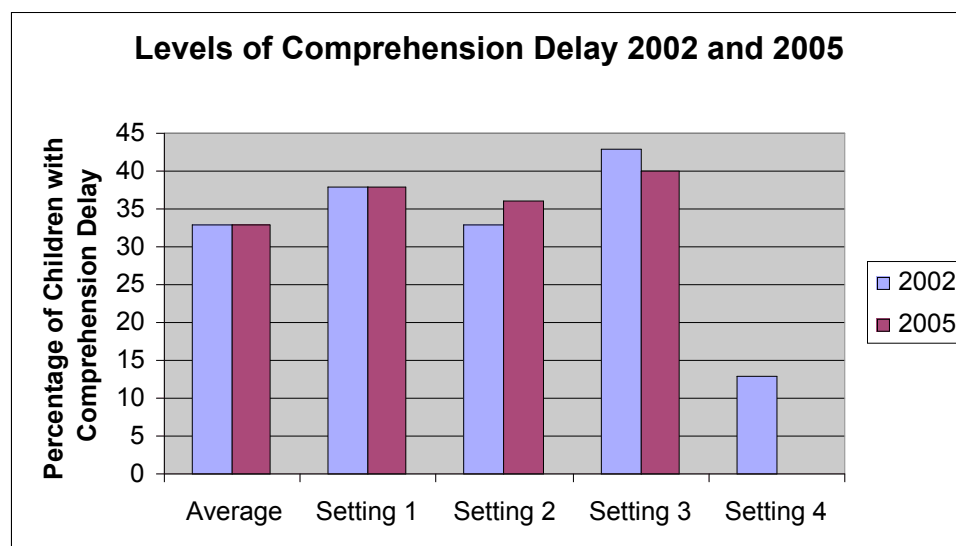
The changes found between the two assessments are shown below:

Comprehension Delay	0.0%
Word Finding Delay	11.8%
Comprehension or Word Finding Delay	8.3%

4.2.3) Analysis

Seventeen children were identified as being 'Within Normal Limits' in the 2002 assessment. Of these eight were boys and nine 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 38% of the boys and 38% of the girls were within normal limits. This equivalency of ability is in line with the results found in 2005.

In 2005 45% of children demonstrated that they had no delay in speech and language. This is an 18.4% increase in ability.



Graph 4 – Levels of Comprehension Delay 2002 and 2005

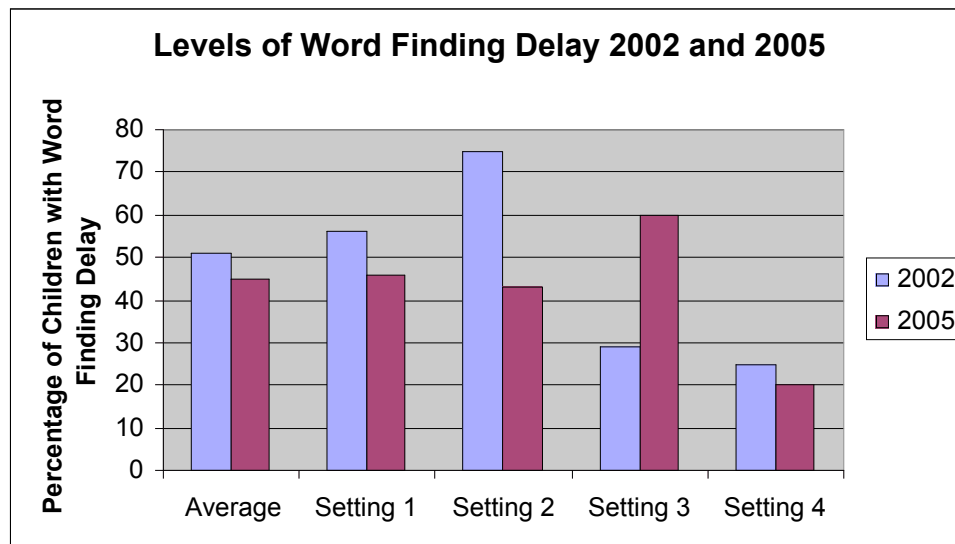
4.2.4) *Comprehension Delay*

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.

In all cases, except for Setting 2, there has been a decrease in the percentage of children with a comprehension delay. The average comprehension delay in the Abbey/Bucknall Sure Start area has not changed between 2002 and 2005.

4.2.5) *Word Finding Delay*

The difference in word finding delay between 2002 and 2005 is more pronounced than that for comprehension delay. The average word finding delay in 2002 was 51% and in 2005 45%. This 11.8% difference has been bettered by all Settings except Setting 3 which saw a word finding delay increase from 29% to 60%. Graph 5 shows how the different results compare.



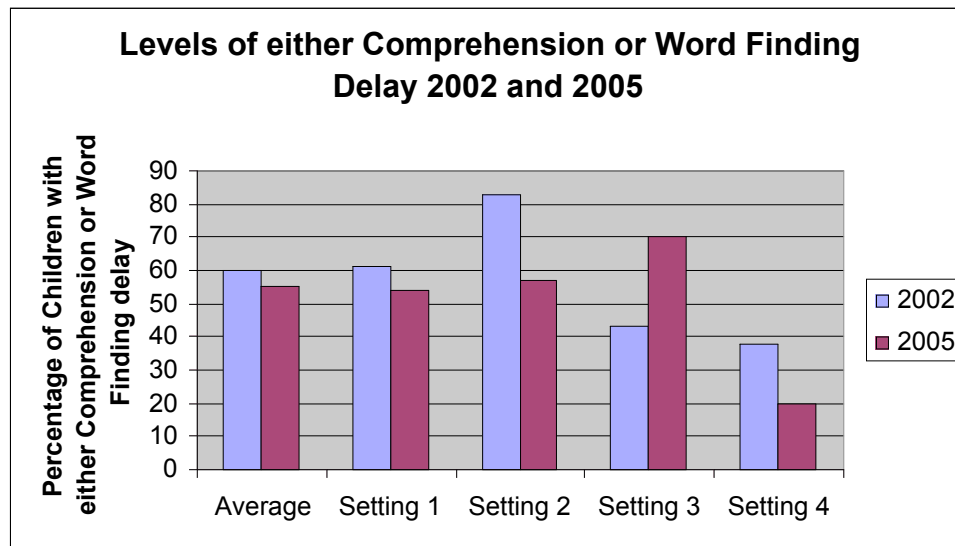
Graph 5 – Levels of Word Finding Delay 2002 and 2005

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 8.3% and the greatest improvement was made by Setting 4 with an improvement of 47.4%. Setting 3 had the worst result with a 62.8% change for the worse being found between 2002 and 2005. Graph 6 shows the comparison between the results of the two assessments.

The difference between the two assessments is shown on Graph 7. It shows that all Settings, with the exception of Setting 3, and the average score were in excess of the 5% improvement targeted. Of concern, though, is the low

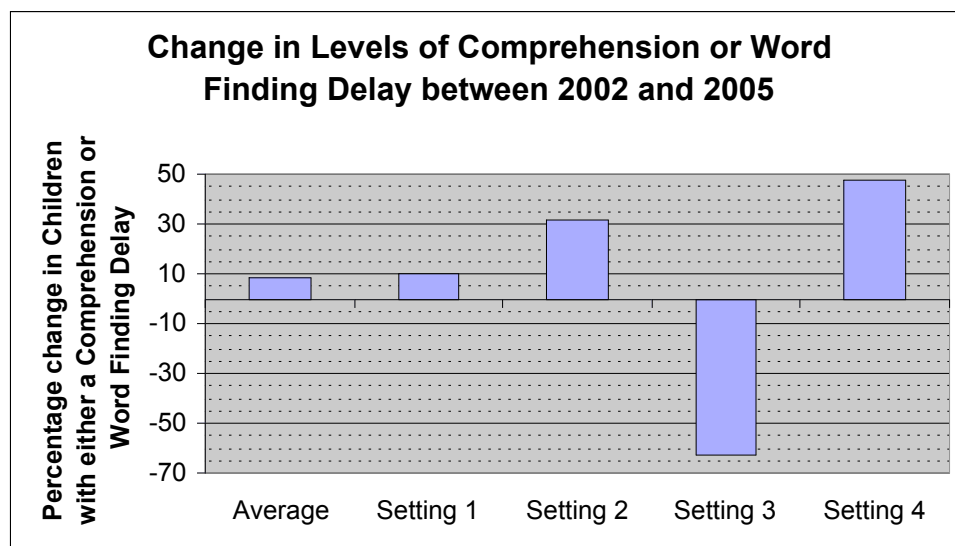
score gained by Setting 3 which saw an increase in the levels of comprehension and word finding delay by 62.8%.



Graph 6 – Levels of either Comprehension or Word Finding Delay 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 Abbey/Bucknall Sure Start. It was found that in settings where children had had more than an average of 25 contacts that there were reductions in the number of children with comprehension or word finding delay.



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

Table 15 holds the results of the investigation. It demonstrates that a higher number of contacts with Sure Start can produce a reduction in the number of children who have either 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	13	12	2141	178.4	9.9%
Setting 2	14	9	2037	226.3	31.4%
Setting 3	10	8	104	13.0	-62.8%
Setting 4	5	3	86	28.7	47.4%
Average	10	8	1092	136.5	8.3%

Table 15 – Number of Sure Start contacts per child in relation to changes in either Comprehension or Word Finding Delay

It was commented, by the Speech and Language Therapist responsible for carrying out all the assessments, that there had been a lack of desire amongst the parents and staff at Setting 3 to engage with either Sure Start or other mainstream services. However, from September 2005 this attitude had changed and there is now a greater wish to utilise the help offered.

5) Conclusion

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

- The number of children in the Abbey/Bucknall Sure Start area with a comprehension and word finding ability that is within normal limits has risen by 18.4% from 38%, in 2002, to 45% in 2005. This represents an improvement of 7 percentage points. It can, therefore, be said that Abbey/Bucknall Sure Start has achieved its aim of reducing, by 5 percentage points, the number of children requiring specialist speech and language help.
- There is no significant difference in the levels of comprehension or word finding delay between boys and girls. That is, in 2002, 38% of boys were within normal limits; in 2005 this figure had risen by 15.8%, or 6 percentage points, to 44%. In the corresponding period girls moved from 38% within normal limits, in 2002, by 21.1% or 8 percentage points to 46%, in 2005.
- The overall reduction in the number of children with either comprehension or word finding delay by 8.3% from 60% to 55% also achieves the 5 percentage point reduction. This improvement has been made by reducing the number of children who have evidence of word finding delay. This has been done by reducing the figure by 11.8% from 51%, in 2002, to 45%, in 2005, a move of 6 percentage points. There has been no reduction, though, in the level of comprehension delay. This has remained constant at 33%.
- There is a relationship between the level of comprehension delay and the level of word finding delay. That is, in all instances the level of word finding delay is higher than that for comprehension delay. This is to be expected, though, as comprehension development precedes word finding development. In one setting, Setting 4, the level of comprehension delay was 0%. The word finding delay was 20%. It should be noted, though, that the Renfrew Word Finding Vocabulary Scale has less sensitive analysis in its standardisation than the Reynell Developmental Language Scales 3 Comprehension scale.
- There is a correlation between the number of Sure Start contacts and a decrease in comprehension or word finding delay. Graph 7 clearly shows an improvement in Setting 2 and Table 15 shows that a high number of contacts with Abbey/Bucknall Sure Start have been made. This indicates that a high number of contacts with Sure Start can produce a reduction in the number of children with a comprehension or word finding delay.
- The setting with the greatest improvement was Setting 4. Setting 4 achieved an improvement of 47.4%, or 18 percentage points, changing

from 38% of children with either a comprehension or word finding delay, in 2002, to 20% in 2005. It can be seen that in this setting there were contacts with Sure Start but that these were at a lower level than in other settings, that is, an average of 28.7 per child. The good work achieved in Setting 4 could be attributed to the low intake level. That is, 14 children in 2005. This means that there is potential for greater individual support within the setting which should further benefit the children as they grow older.

- Making use of all services available that are in place to help children is key to reducing comprehension and word finding delay. This can be seen from the results of Setting 3 where parents have not made full use of the services available to them and this has produced a decline, in isolation, rather than an improvement in ability.

6) Recommendations

It is recommended that:

- The work begun in the Abbey/Bucknall 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 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.
- Abbey/Bucknall 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 occurrence 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 practices and strategies used by the parents and carers of the children in Setting 4 are investigated to establish if they can be effectively passed on to other parents/carers.
- The parents and practitioners of Setting 3 are encouraged to make full use of the help and assistance that is offered to them so that the incidence of comprehension and word finding delay can be reduced.
- The assessment is repeated in 2008 to identify if further improvements can be made, and if so, by how much.

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