The Vocabulary Enrichment Programme: An Intervention to Improve Vocabulary Skills with First Year Students

National Behaviour Support Service

National Behaviour Support Service (NBSS)

Navan Education Centre

Athlumney

Navan

Co. Meath

Telephone: +353 46 9093355

Fax: +353 46 9093354

Email: nbss@ecnavan.ie

Web: www.nbss.ie

Contents

Executive Summary

The adapted Vocabulary Enrichment Programme (VEP) is a school based, whole class intervention that supports development of oral vocabulary skills in adolescents. This research project aimed to evaluate if the programme would be successful in improving the oral vocabulary skills of first year students in Irish post-primary schools in areas of socioeconomic disadvantage. Four hundred and seven first year students from six NBSS partner schools participated with three hundred and nineteen students from four schools receiving the intervention in September 2013 and the remaining eighty-eight students from two schools acting as controls and receiving the intervention later in the same academic year. All students were assessed pre-intervention and post-intervention on standardised measures of oral language. Teachers were comprehensively trained by, and provided with weekly support from, the NBSS senior speech and language therapist (SLT). The programme was delivered in regular English or literacy classes twice a week for 12 weeks.

Analysis of students' standard scores at pre-intervention stage highlighted that approximately 56.6% of students presented with difficulties in all standardised oral vocabulary assessments. This illustrates the high level of oral vocabulary difficulties adolescents from areas of socioeconomic disadvantage present with and is consistent with findings from international research. These scores strongly indicate the need for whole school approaches to vocabulary learning for all students that include a focus on semantic language skills, such as the adapted VEP intervention, as well as more integrated additional supports for those who need it. Quantitative findings demonstrate significant improvement on all five raw score vocabulary measures for the intervention group more than the control group (*word classes receptive (p=0.028); word classes expressive (p<0.*001); word definitions (p=0.013) word associations (p=0.013); BPVS-3 (p<0.001)*). This means that students improved their vocabulary knowledge and skills as a result of completing the adapted VEP' to This means that students improved their vocabulary knowledge and skills as a result of completing the adapted VEP. In addition, these improvements were made on standard scores in three of the four standardised tests more than the control group (word classes receptive *(p=0.026*); word classes expressive (p<0.001*); BPVS-3 (p<0.009*)*). Improvement on standardised tests of language indicates that this intervention, targeting vocabulary strategies and skills, improves students' overall oral receptive and expressive language skills.

Qualitative findings from interviews with eight teachers, from two of the intervention schools[1], further reinforce the merits of this intervention. Teachers reported that the programme is a novel, useful and necessary intervention which develops students' skills and strategies and fills a gap in the curriculum. As well as improving vocabulary skills, teachers also highlighted other impacts such as improved student confidence and motivation. They described the adapted VEP as a flexible programme that highlights students' abilities in understanding and using language. The teachers indicated that the programme could be run at whole class, small group and individual student level.

Although time for preparation and delivery, as well as the amount of content to cover, emerged as common challenges, these did not impede the improvements students made on vocabulary measures. This may have been the result of some schools using a more flexible intervention delivery time of 14-16 weeks. Teachers reported they felt team teaching was extremely useful in supporting the level of interactive group and peer work utilised within the programme but that this approach needed to be consistent with at least one teacher being a constant or lead in both class periods.

Comprehensive training combined with regular monitoring and flexible support emerged as important factors in the success of the intervention. Teachers reported that working collaboratively with the SLT on a weekly basis supported reduction of uncertainty and stress. Teachers also identified the importance of all staff in a school being aware of the intervention programme and the skills and strategies that are being taught within it.

Findings from this research support the delivery of the adapted VEP as a whole class intervention to support and develop students' underlying vocabulary skills. These skills improved significantly as a result of students receiving the programme. However to ensure sustainability, it was found that these skills and strategies need to be re-addressed following the completion of the programme, in multiple classes, across all curricular areas.

 The following are some of the main recommendations to promote the successful running of the adapted VEP at whole class level in post-primary schools:

- Comprehensive teacher training in running the programme by a speech and language therapist or literacy specialist over 4-5 hours.
- Timetabling and planning that facilitate the programme for two class periods per week for 12-16 weeks depending on the pace of the class group.
- Regular support from a speech and language therapist or literacy specialist for the initial intervention period.
- Time given to plan and prepare the intervention each week.
- Facilitating team teaching for teachers of the programme.
- To support sustainability, resources and time should be provided for teachers to re-address the skills and strategies taught in the programme in English and other subjects.
- Providing a short 30-60 minute continuing professional development session explaining the programme, particularly the strategies taught within the programme, for all staff in the school.

---

[1] Due to geographic and time restraints two of the intervention schools did not participate in the teacher interviews following completion of the programme.

Overview

The National Behaviour Support Service (NBSS) was established by the Department of Education & Skills in 2006 in response to the recommendation in School Matters: The Report of the Task Force on Student Behaviour in Second Level Schools (2006).

The role of the NBSS is to assist partner schools in addressing behavioural concerns on three levels:

- Level 1: School-wide Support
- Level 2: Targeted Intervention Support
- Level 3: Intensive, Individualised Support

The NBSS model of support draws extensively from Positive Behavioural Interventions and Supports -PBIS (Sugai & Horner, 2002), Response to Intervention - RtI (Fuchs & Fuchs, 2006) and the Comprehensive, Integrated, Three-Tiered model of prevention – CI3T (Lane, Kalberg & Menzies, 2009) frameworks. The integration of these frameworks offers opportunities to address the behavioural needs as well as the social, emotional and academic needs of students effectively, with interventions at different levels of intensity and support. This problem solving model is founded on international best practice (Bohanon et al., 2006; Carr et al., 2002; Duffy & Scala, 2012; Ehren, Deshler & Graner, 2010; Hawken & Horner, 2002; Lewis & Sugai, 1999; McPeak, et al., 2007).

In NBSS partner schools this three-tiered approach is applied to behaviour interventions as well as interventions that address the social, emotional and academic literacy and learning needs of students. All three levels of support to NBSS partner schools are customised to the specific characteristics, needs and requirements of each partner school on an on-going basis as change occurs. NBSS interventions and supports emphasise using evidence based practices for promoting positive behaviour change.

LANGUAGE AND LITERACY DEVELOPMENT AND THE WORK OF THE NBSS

Supporting and developing the language and literacy skills necessary to engage effectively in all aspects of school and home life is integral to the work undertaken to support students in NBSS partner schools.
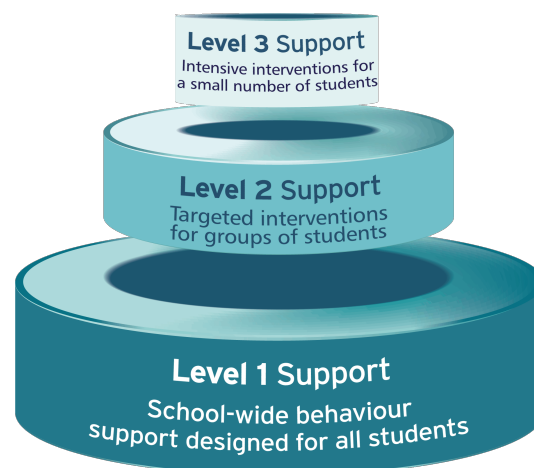
Research highlights how behavioural and academic problems exert reciprocal influences on one another. The reciprocal nature of this association is evident with behavioural difficulties affecting children and young people's academic achievement (less time on task, absenteeism, peer and adult rejection) and similarly academic failure leading to low self-esteem, alienation from the school community, negative behaviours and in some cases early school leaving (McEvoy & Welker, 2000; McIntosh et al., 2007). The research points to the importance of recognising the links between academic and behaviour difficulties and coordinating systems for prevention and intervention in both areas (Bulotsky-Shearer & Fantuzzo, 2011; Byrne & Smyth, 2010; Miles & Stipek, 2006; Trzeniewski et al., 2006; Valiente et al., 2010).

'Supporting and developing the language and literacy skills…is integral to the work undertaken to support students in NBSS partner schools.'

To support students to develop the language and literacy skills needed to succeed at post-primary the NBSS looks to the research, nationally and internationally, on Adolescent Language and Literacy and to the most effective practices and strategies for addressing the language and literacy needs of all adolescent learners. NBSS Level 1 language and literacy support for example involves the explicit teaching of comprehension, thinking and learning skills and strategies, as well as building vocabulary skills and knowledge and strengthening writing skills (as this not only improves writing ability but also enhances students' ability to read a text accurately, fluently, and comprehensively).

NBSS Level 2 and 3 language and literacy support is provided to students for whom Level 1 provision is not sufficient. Level 2 support is about targeting, planning and monitoring short term focused interventions for small groups of students. Such an intervention might for example address two or more of the five main components of reading – comprehension, vocabulary, fluency, phonics and phonemic awareness - or focus on writing, spelling or study skills development. For some students, a tightly focused group intervention will be sufficient to allow them to develop their learning and literacy skills and build their confidence to engage more actively in the learning process.

NBSS Level 3 support is concerned with developing interventions necessary for students with multiple and specific challenges to their learning and behaviour. If these students have poor language and literacy skills, focus will be on implementing interventions to teach skills that will enable them to understand and express themselves through oral and written language.

VOCABULARY SKILLS AND THE CURRICULUM

Speech, language and communication skills are an integral part of literacy. Literacy includes 'the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media' (*DES, 2011: p.8*). This highlights the integral nature of oral language development in both literacy and numeracy. Development of vocabulary skills is inherent to both oral and written language development. Students aged 12-17 years are exposed to 10,000 new words from textbooks alone over their years at post-primary school (Clark, 2003). The transition to post-primary school

requires students to have a high level of vocabulary knowledge in order to communicate efficiently in the academic context (Wilson et al., 2010). Vocabulary knowledge develops at a slower rate for children from disadvantaged backgrounds compared to children from more advantaged areas (Spencer et al., 2012). Once differences in vocabulary acquisition are established, they tend to remain (Beck & McKeown 2002). Students with limited vocabulary often find this a significant barrier to their learning.

The framework for Junior Cycle (DES, 2012) provides a focus for oral and written language development highlighted within its key skills approach. The programme aims to develop students' skills in connecting with learning in order to improve the quality of that learning, have better literacy and numeracy outcomes and thus develop a strong profile of key skills including 'communicating', 'managing information and thinking', 'managing myself', 'staying well', 'working with others' and 'being creative' (DES, 2013). Each of these six key skills includes elements of different speech, language and communication skills which are linked to vocabulary skills. Language and literacy are particularly important for the specification for Junior Cycle English (DES, 2013). Within the new English specification, language is highlighted as essential for giving students the opportunity *'to access the understanding, knowledge and skills to promote their personal growth and have effective participation in society'* and to '*discover information, develop thinking and express ideas and feelings'*. There is a strong focus on developing and learning through oral language. The Junior Cycle English specification clearly illustrates the interactive and interdependent nature of engaging with language, highlighting three specific elements within this: 'communicating as a listener, speaker, reader and writer'; 'understanding the content and structure of language' and 'exploring and using language'. Students need support to develop both oral and written vocabulary skills in order to fully benefit from this integrated approach. Table 1 below highlights the key vocabulary skills linked to these three main elements.

Table 1: Key Vocabulary Skills within the Learning Objectives of Junior Cycle English

Key Elements within Junior Cycle English	Linked Oral and Written Vocabulary Skills
Communicating as a listener, speaker, reader and writer	• Using and understanding vocabulary. • Verbal comprehension. • Sentence structure. • Reading comprehension.
Exploring and using language	• Understanding and using vocabulary. • Understanding and using semantic links. • Using and understanding non-literal or multiple meaning vocabulary. • Using vocabulary for different purposes (negotiation, persuasion).
Understanding the content and structure of language	• Understanding and using vocabulary. • Understanding and using semantic links. • Using and understanding non-literal or multiple meaning vocabulary. • Understanding sentence structure. • Understanding grammar.

COLLABORATIVE WORKING BETWEEN TEACHERS AND SPEECH & LANGUAGE THERAPISTS

'Literacy and Numeracy for Learning and Life: The National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020' (DES, 2011) recommends the collaborative working of Teachers and Speech and Language Therapists (SLTs) as essential in supporting literacy development in both pre-school and school-age children from disadvantaged backgrounds. Evidence highlights that collaboration between SLTs and teachers, where teachers deliver the intervention, is a comprehensive and effective method of intervention (Larson & McKinley 2003, Lindsay et al., 2010, Starling et al., 2012, Thornburg et al., 2000) but further high quality clinical research is required to establish the effectiveness of this method of service delivery, particularly for post-primary school students.

International research highlights that teachers report they are not supported to accommodate children with additional language needs in mainstream classrooms (Dockrell & Lindsay, 2001). As language difficulties persist and curriculum challenges increase, teachers in post-primary schools are faced with the task of making the curriculum accessible for all students (Lindsay et al., 2010). Moreover, teachers feel that they lack the necessary training, skills and supports to meet the needs of these children (Dockrell & Lindsay, 2001).

VOCABULARY LEARNING STRATEGIES

Vocabulary learning predominantly utilises three main strategies: direct instruction, contextual analysis and morphological analysis (Lesaux et al., 2010, Nippold, 2007). In schools 'direct instruction' is the most commonly used method as it enhances students understanding of word definitions. However being able to define a word does not translate into fully understanding or being able to use words appropriately in multiple contexts (Bryant et al., 2003; Nippold, 2008;). Contextual analysis is a strategy in which students must identify semantic (meaning) and syntactic (sentence structure) features or clues to work out the meaning of a given word. Research highlights that this needs explicit instruction for many students (Bryant, 2003; Nagy & Scott, 2000). Morphological analysis is a strategy where the student can break a word into its individual components in order to work out its meaning. This is deemed effective and widely applicable to deciphering new vocabulary (Baumann et al., 2003; Ebbers & Denton, 2008; Nippold & Sun, 2008). As vocabulary learning is specific to an individual it is important that they are able to use these strategies themselves and be able to combine them (Bryant et al., 2003; Spencer et al., 2012)

THE VOCABULARY ENRICHMENT PROGRAMME

Speech, language and communication needs (SLCN) and particularly vocabulary difficulties have been identified as being more prevalent in populations of adolescents from areas of socioeconomic disadvantage (Spencer, Clegg & Stackhouse, 2012) and as having a significant impact on attainment in school (Spencer, Clegg & Stackhouse, *unpublished*). Vocabulary learning has been identified as one of the most significant problems experienced by students with speech, language and communication needs (Bishop, 1997;

Gathercole, 1993; Sim, 1998). Knowledge of vocabulary is a strong predictor of academic achievement and has an important role in literacy and cognitive development (Cunningham & Stanovich, 1997; Nagy et al., 1985). Vocabulary training has been found to be effective in improving language performance and has been identified as an area that can be modified as a result of intervention (Nash & Snowling, 2006; Parsons et al., 2005). Yet, despite its importance, little direct time is devoted to vocabulary instruction in school (Dockrell & Messer, 2004).

The Vocabulary Enrichment Programme (VEP) was created by Dr. Victoria Joffe with input from post-primary subject teachers, special educational needs (SEN) teachers and students. The aims of the VEP are to *'enhance the understanding and facilitate the expression of a wide range of basic and relevant concepts, meanings and vocabulary in students with varied SLCN'* in post-primary school (Joffe, 2011: p.9). The programme focuses on developing oral language skills including semantic categorisation, semantic mapping, grammar, contextual features and multiple word meanings.

The VEP was originally researched through a UK project 'Enhancing Language and Communication in Secondary Schools' (ELCISS) funded by The Nuffield Foundation and managed by Dr. Victoria Joffe in collaboration with Nita Madhani, Speech and Language Therapy manager from Redbridge PCT. The project explored the prevalence and nature of language impairment in post-primary school students in two outer London boroughs through small group interventions using the VEP. These groups were run with students with identified language impairment by trained classroom assistants with support from speech and language therapists. The results from the project indicated significant improvements on non-standardised measures of vocabulary (Joffe, 2011). There were no identified improvements on standardised measures of vocabulary.

'Data from the pilot project … found that as a group, students improved significantly on all areas tested over the course of the intervention…on raw scores as well as standard scores.'

Approximately 88% of 40 students attending schools in Limerick, assessed by the NBSS SLT in the 2011/12 academic year had receptive and expressive vocabulary difficulties. Support targeting underlying vocabulary (semantic language) skills was indicated and students who needed this support were engaged in groups using the Vocabulary Enrichment Programme (VEP; Joffe, 2011) twice or three times weekly. These were run by the students' resource teacher, behaviour support teacher or behaviour for learning teacher with the support of the SLT once per week. This was evaluated as a pilot project.

Data from the pilot project in Limerick found that as a group, students improved significantly on all areas tested over the course of the intervention (both formal and informal language measures) on raw scores as well as standard scores. Teacher feedback highlighted that teachers enjoyed running the programme and viewed it as beneficial to students. Feedback also highlighted that teachers valued a structured and targeted programme to support students' individual needs and reported that many more students in their schools would benefit from the programme.

THE ADAPTED VEP RESEARCH PROJECT

In 2013 the NBSS developed the adapted Vocabulary Enrichment Programme randomised control trial project following positive pilot data from the 2012/13 academic year. This school-based, teacher directed programme supports the development of semantic and syntactic vocabulary skills which are essential for the thorough understanding and use of new and existing language for all students. The programme focuses on multiple levels of vocabulary instruction.

The programme was originally developed for use with small groups of students with identified language impairments. Thus an adapted version of the VEP was developed by the NBSS senior speech and language therapist to fit in with whole class teaching. This includes a detailed teacher booklet with session plans strongly based on the VEP programme (Joffe, 2011) which outline session objectives, detail the steps in teaching each objective and give options and choices for activities and homework. It also includes a memory stick with modified/differentiated activities from the VEP and additional resources developed with teachers and the senior SLT during running of the pilot programme. The programme comprises of twelve sessions, each taking two 40 minute classes, strongly based on the content of sessions 1-10 of the 'Vocabulary Enrichment Programme', with two revision sessions added. The programme is designed to be delivered over 12 weeks but some classes took up to 16 weeks to complete. It targets the development of a combination of vocabulary learning strategies, including contextual strategies, morphological analysis strategies and direct instruction. These strategies (Table 2) enable students to learn to independently interpret new words.

Table 2: The 'Vocabulary Enrichment Programme' 12 Session Outline

SESSION	TOPICS COVERED
Session 1	Introduction: What are words?
Session 2	Describing words using senses, characteristics and antonyms/synonyms
Session 3	Word Maps; Syllables; Rhyme; Categorisation
Session 4	More syllables; Alliteration; Parts of speech - Nouns/ Verbs
Session 5	Parts of speech (adjectives, adverbs, conjunctions, prepositions, pronouns, articles, interjections)
Session 6	Identifying parts of speech; Complex Word Maps; Understanding word families
Session 7	Prefix, Roots and Suffix's; Dictionary Use
Session 8	Similarities and Differences; Multiple meaning words; Dictionary Use
Session 9	Use of Spiderwebs; Understanding and using idioms; Dictionary use
Session 10	Using word detective strategies; Dictionary use
Session 11	Revision and Generalisation Session
Session 12	Revision and Generalisation Session

International evidence highlights that vocabulary difficulties are more prevalent for students in areas of socioeconomic disadvantage (Sage, 2005; Spencer et al., 2012) and that vocabulary skills can be developed and modified as a result of intervention (Nash & Snowling, 2006; Parsons et al., 2005). Within Ireland there is a national focus on oral language and literacy development within the new Junior Cycle Key Skills and Junior Cycle English programme. For these reasons combined with the positive pilot data, an adapted version of the

VEP programme was developed and offered to 6 post primary NBSS partner schools as a Level 1 whole school support. The schools that participated in this pilot were from two geographic locations, two were mixed sex schools and four had single sex student populations.

'Uniquely this project focuses on whole class teaching of vocabulary skills to all first year students, regardless of whether they have diagnosis of SLCN, in mainstream DEIS schools.'

Uniquely this project focuses on whole class teaching of vocabulary skills to all first year students, regardless of whether they have diagnosis of SLCN, in mainstream DEIS[2] schools. It also adopts a collaborative support model, with teachers delivering the programme with support from speech and language therapy, a service delivery model which has not been previously researched for this type of intervention. Lastly it looks at the impact such an intervention has on behaviour and emotional well-being in school. Two main research areas were identified.

Research Area One:

- Is the adapted VEP more effective in improving students' vocabulary specific language skills on standardised language tests than no intervention?

Research Area Two:

- What are teachers' experiences of running the adapted VEP programme at whole class level and can it be effectively delivered through the Irish post-primary school curriculum?

---

[2] Delivering Equality of Opportunity in Schools (DEIS) action plan focuses on addressing and prioritising the educational needs of children and young people from disadvantaged communities, from pre-school through second-level education (3 to 18 years).

Methodology & Findings

STUDY DESIGN

A randomised control trial (RCT) design was chosen for the study and six schools in particular geographical areas were chosen, four schools in the mid-west region of Ireland (area 1) and two schools from the eastern region (area 2). The principals of the six targeted post primary schools were sent information packages in April prior to the project beginning in September and all agreed to participate. Four schools (two from area 1 and two from area 2) were asked to begin the programme in September 2013 (Intervention Group) and the other two schools (area 1) acted as controls. Within the intervention schools two were single sex (one male and one female) and two were mixed schools. Within the control schools both were single sex, all female schools. All students attending first year in the four intervention and two control schools were asked to participate.

Teachers from the two intervention schools in area 1 were invited to participate in interviews regarding their experience of running the adapted VEP programme. For geographical reasons interviews could not be conducted with the remaining two intervention schools. Eight teachers who had implemented the adapted VEP participated in the interviews.

Student Participants

Parents of 424 students gave consent for their children to be involved in testing the adapted VEP intervention. Students whose parents did not consent to formal assessment and testing were still included in the intervention (n=4). All students verbally assented to participation prior to data collection. Teachers verbally consented to take part in the training and run the programme as outlined.

Thirteen students were absent on at least one time point and four students had left the schools at Time 2 re-assessment stage. Therefore pre and post data was collected for 407 students. Both the intervention group (n=319) and the control group (n=88) were assessed at Time 1 (pre-intervention) and Time 2 (post intervention) by the researchers (six speech and language therapy masters students supervised by the senior speech and language therapist, and five fully qualified speech and language therapists). Following post-testing, the control schools were given the opportunity to carry out the programme.

Training of Teachers

All teachers involved attended two 2.5 hour training sessions run in their school by the NBSS senior SLT. They

were provided with a detailed Teacher Booklet which included lesson plans and a fidelity checklist for each week of the programme, the VEP programme itself and a memory stick containing resources. Teachers were provided with the opportunity to meet with the NBSS senior SLT once each week for the 12 weeks of the programme or contact was made via email if this was not possible.

Assessment Measures

Vocabulary Measures: Vocabulary skills were measured pre-intervention and post-intervention on standardised measures of receptive and expressive vocabulary. Assessment duration was approximately 25-45 minutes and students were assessed in a quiet location in their school.

'All teachers involved attended two 2.5 hour training sessions run in their school by the NBSS senior SLT.'

Students were individually assessed using three subtests from the Clinical Evaluation of Language Fundamentals – 4 (CELF-4UK) (Semel et al., 2006) and the British Picture Vocabulary Scales (BPVS-3) (Dunn & Dunn 2009). Both report good validity and reliability (Dunn & Dunn, 2009; Semel et al., 2006). Both assessments are standardised on UK referenced norms, are traditional measures of language understanding and use and are not directly linked to the strategies taught in the programme.

CELF-4 Subtests:

- Word Classes Receptive and Expressive Subtest- This subtest requires participants to identify and explain the relationship between two words. It provides raw scores and standard scores separately for word classes receptive and word classes expressive.

- Word Definitions subtest – This subtest requires participants to give definitions of heard words in a sentence context. It provides raw scores and standard scores.

- Word Associations subtest - This subtest involves naming components of a given category which highlights students' verbal fluency skills. The raw score can be calculated into a criterion referenced score.

BPVS-3: This assessment is used to measure students' receptive vocabulary. It requires the participant to point to the picture corresponding to a heard word from a choice of four pictures.

Attendance and Treatment Fidelity: Attendance and treatment fidelity measures were taken throughout the 12 weeks of intervention. Teachers noted which students were absent for each session and which students found particular sessions difficult. Teachers rated the classes' engagement and understanding of each objective on completion of each session.

Teacher Interviews

Semi-structured interviews were completed by the researchers (six speech and language therapy masters students) in pairs, where one interviewed the participant while the other video recorded the interview. They included the use of open-ended questions with planned and unplanned prompts. Semi-structured interviews allow for the exploration of predetermined topics, based on previous research, with sufficient scope for new themes to emerge (Fielding & Thomas, 2008). It was reiterated at the start of each interview that answers were confidential and that both positive and negative feedback was welcomed. The data generated during

interviews was subsequently analysed using thematic analysis which empowers the researcher to identify, analyse and report patterns within data (Braun & Clarke, 2006).

Table 3: Semi Structured Interview Questions

1.	How did you find the programme overall?
2.	What did you first think of the programme?
3.	How did you feel the programme progressed?
4.	Do you feel the students benefitted from the programme? If so, how?
5.	Do you think the students enjoyed the programme? If so, in what ways?
6.	How did you find the support you got in running the programme?
7.	What would you change about the programme and why?
8.	Do you have any other information to give about the programme and your experience working on the programme?

All interviews were conducted in person, within the school and lasted between eight and twenty eight minutes (average 15 minutes). Table 4 shows the demographic information of the participants. Three teachers were from school A and five teachers were from school B. Both post-primary schools were single gender schools.

Table 4: Demographic Information of the Participants (n=8)

Participant	**Gender**	**Teaching Role**	**Individual/Team-teaching**
Respondent 1 (R1)	Male	English Teacher	Team-teaching
Respondent 2 (R2)	Female	English Teacher	Team-teaching
Respondent 3 (R3)	Female	Behaviour Support Teacher	Team-teaching
Respondent 4 (R4)	Male	English Teacher	Individual Teaching
Respondent 5 (R5)	Female	English Teacher	Team-teaching
Respondent 6 (R6)	Female	English Teacher	Team-teaching
Respondent 7 (R7)	Female	Resource Support Teacher	Team-teaching
Respondent 8 (R8)	Female	Resource Support Teacher	Team-teaching

FINDINGS RESAERCH QUESTION ONES

Research Question One: Is the VEP more effective in improving students' vocabulary specific language skills on standardised language tests than no intervention?

Demographics

The following table presents the mean age and gender of students included in the intervention. In total there were 407 students involved in testing the programme, 170 male and 237 female. There were no male students in the control group as both schools were single sex female schools. The intervention group had both male and female participants. The mean student age across all groups was 12 years 8 months at pre-intervention stage.

Table 5: Demographic Information

Group	Cohort	Male	Female	Mean Age (Standard Deviation)
Intervention	319	170	149	12 years 8 months (6.40 months)
Control	88	0	88	12 years 9 months (7.09 months)
Total/Overall	407	170	237	12 years 8 months (6.47 months)

Statistical Analysis: Improvement in Vocabulary Skills

Statistical analysis looked at the efficacy of the intervention, i.e. whether the adapted VEP programme improved students' raw scores on the vocabulary measures thus improving students' skills and abilities and also its effectiveness, i.e. whether the programme improved students' standard scores on the vocabulary measures thus reducing the gap in vocabulary skills between them and age matched peers. Independent t-tests were used to statistically analyse differences between the intervention and control group raw scores at pre-intervention stage and subsequently to identify whether this had an impact on improvement. Vocabulary raw score measures were analysed using a Univariate ANCOVA which allows you to reduce any impact of age on results and identify real significant change as a result of the intervention programme. Standard score vocabulary measures were analysed using descriptive statistics and repeated measures ANOVA's.

Pre-Intervention Scores: Five separate tests of vocabulary understanding and use were used: three standardised subtests of the CELF-4, one criterion referenced subtest of the CELF-4 and the BPVS-3. Table 6 provides an analysis of the percentage of students with standard scores within the vocabulary difficulties range at pre intervention stage using the three standardised subtests of the CELF-4 and the BPVS. A standard score of 6 or less falls into the language difficulties range on the CELF-4 subtests and a standard score of 84 or less falls into the language difficulties range on the BPVS-3. Within the intervention group over 50% of students were in the difficulties range on all tests at pre-intervention, within the control group over 41% of students were in the difficulties range. The BPVS-3 had the highest percentage of students within the difficulties range at 66.8% for the intervention schools and 61.5% for the control schools.

Table 6: Number of Students in the Vocabulary Difficulties Range Pre-Intervention

	Intervention	Control
Word Classes Receptive	50.9%	41.7%
Word Classes Expressive	56.1%	59.4%
Word Definitions	58.5%	58.3%
BPVS-3	66.8%	61.5%

Efficacy of the adapted VEP: All vocabulary measures showed significantly more improvement in the intervention schools relative to the control schools following completion of the adapted VEP programme as illustrated in Figure 1 .

Figure 1: Average % Improvement on Raw Score Vocabulary Measures from Pre to Post-Intervention
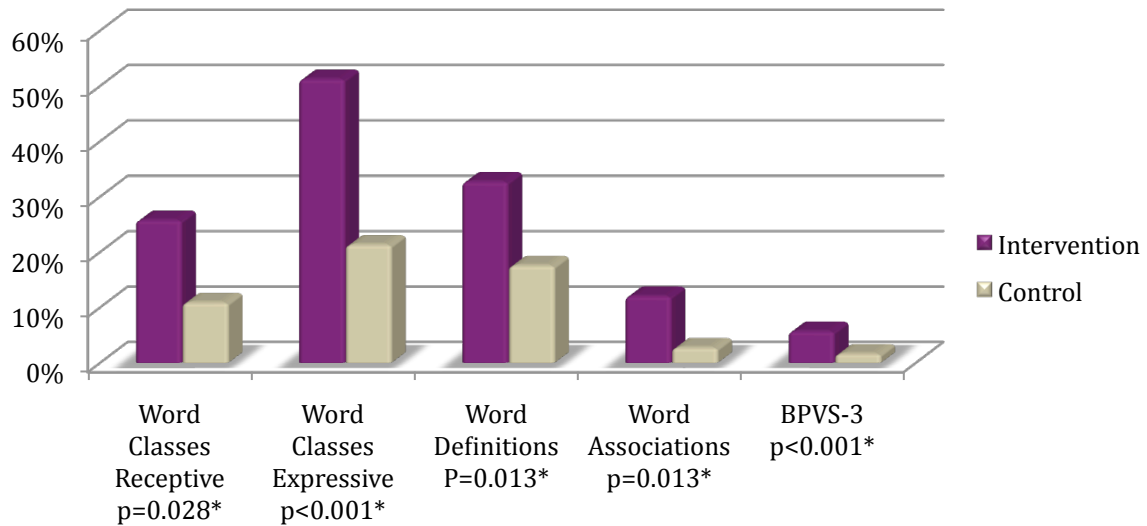
Effectiveness of Adapted VEP: In order to establish the effectiveness of the adapted VEP programme it was necessary to analyse the standard score changes from pre to post-intervention. As previously mentioned, three subtests of the CELF-4 (word classes receptive; word classes expressive; word definitions) and the BPVS-3 had computable standard scores.

Table 7 provides an analysis of the percentage of students with standard scores within the vocabulary difficulties range (severe, moderate and mild) at the pre and post-intervention stage. Within the intervention group over 50% of students were in the difficulties range on all tests before the intervention. Post intervention there was a significant improvement in standard scores across all tests (Word Classes Receptive-$p<0.001$; Word Classes Expressive- $p<0.001$; Word Definitions- $p<0.001$; BPVS-3- $p<0.001$). This includes students moving out of the severe/moderate difficulties range as well as an increase in the number of students presenting in the average and above average range across all the tests.

Table 7: Number of Students in the Vocabulary Difficulties Range Pre to Post Intervention

	Intervention		Control	
	Pre	**Post**	**Pre**	**Post**
Word Classes Receptive	50.9%	33.2%	41.7%	39.8%
Word Classes Expressive	56.1%	27.4%	59.4%	57.9%
Word Definitions	58.5%	43.6%	58.3%	55.7%
BPVS-3	66.8%	51.8%	61.5%	60.2%

To identify if this standard score improvement was specifically related to the adapted VEP programme it was compared to improvement within the control group. This analysis identified that improvement in standard scores on three of the four tests was significantly better than the control group (Word Classes Receptive (*p=0.026)*; Word Classes Expressive *(p<0.001)* and BPVS-3 (*p=0.009)*) as illustrated in Figure 2.

Figure 2: % Improvement in Standard Scores from Pre-Post Intervention
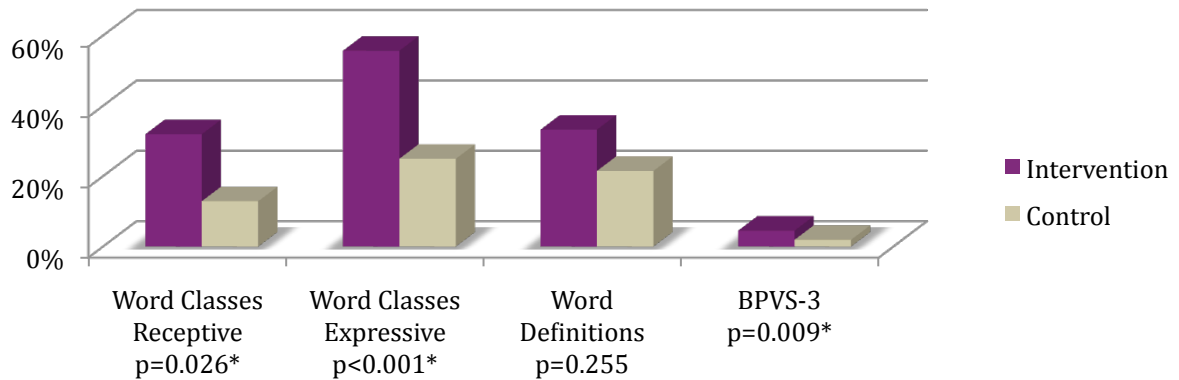
Differences between Groups at Pre-Testing Stage: As a group the intervention schools scored significantly lower than the control group schools before the intervention on two of the five raw score vocabulary measures (word classes receptive; *p=0.016* and word associations; *p=0.001*) and thus the two groups were not well matched for these two measures. At Time 2 (post-intervention) the intervention group and control group had no significant difference on these measures. This indicates that the significant difference in the amount of improvement for word classes receptive and word associations may be the intervention group catching up with the control group. It also indicates that improvement made by the intervention group for word classes expressive, word definitions and the BPVS-3 means they are significantly better than the control group on these measures at post-intervention.

> '... over 50% of students were in the difficulties range on all tests before the intervention.'

FINDINGS RESEARCH QUESTION TWO

Research Question 2: What are teachers' experiences of running the adapted VEP programme at whole class level and can it be effectively delivered through the Irish post-primary school curriculum?

This research question focuses on teachers' experience of implementing a whole class vocabulary intervention in disadvantaged post-primary schools. The aim of this element of the research was to gain an understanding of mainstream post-primary school teachers' experiences around:

- The positive and challenging features of the adapted VEP itself.
- The perceived barriers and facilitators of implementing the programme and potential benefits teachers gain from successfully implementing the adapted VEP.
- The factors that facilitate or hinder collaborative practice with SLTs and teachers within the post primary educational setting.

Three main themes emerged through analysis of the data: 1. The Positive Features of the adapted VEP; 2. The Challenging Features of the adapted VEP and 3. The Significance of Support during the adapted VEP. Sub themes categorised within these main themes will be discussed. The themes will be presented and described with supportive quotations from the teachers.

1. The Positive Features of the adapted VEP

Figure 3: The Positive features of adapted VEP
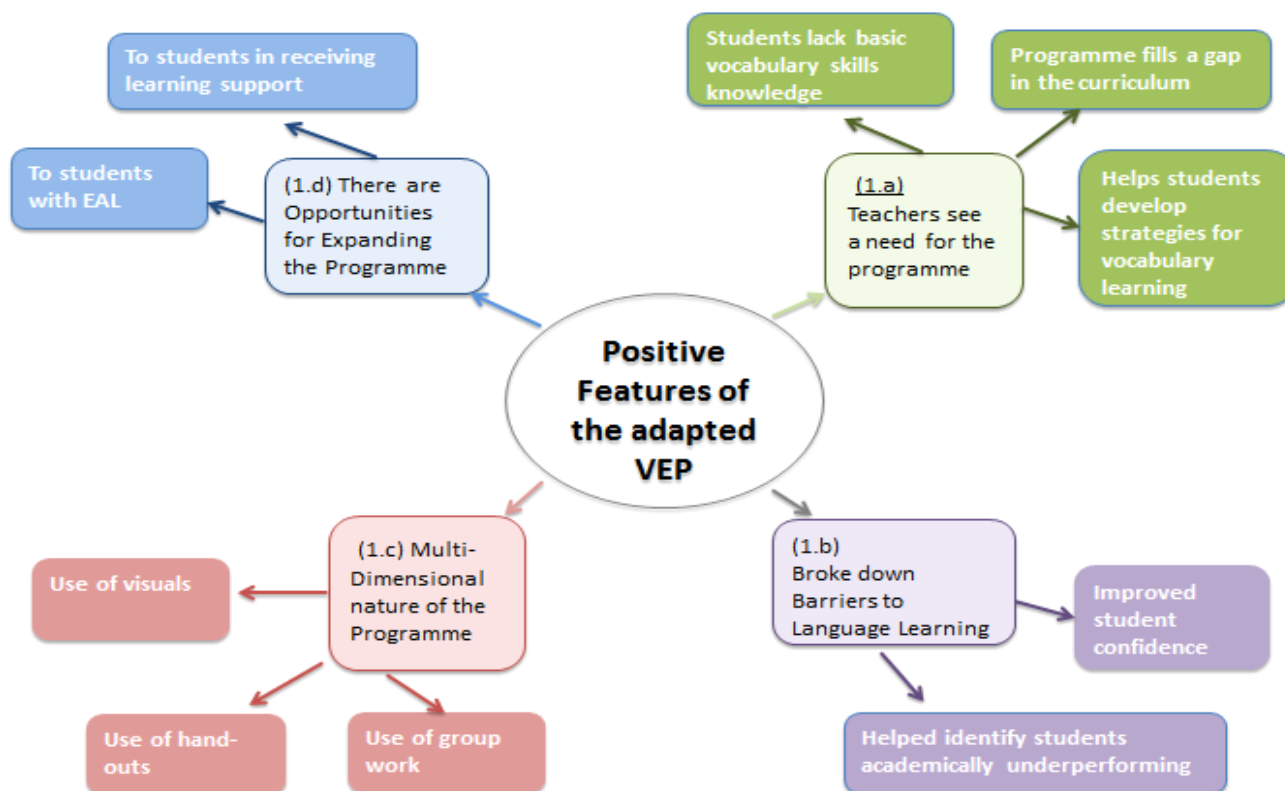
(1.a) Teachers Recognise the Need for a Vocabulary Intervention

Many teachers positively discussed the contribution that the vocabulary programme made to their classes and that they and other teachers see a need for this type of language intervention in schools.

> *'For years I have been giving out about first years coming in not knowing...the basic rudiments of the language. I felt that this was an opportunity...that I could address a lot of those issues...the foundations should be laid so then I could move on from there'.* (R2).

> *'They don't understand basic words like describe, imagine, words like that, which is very hard for them to access in an exam...they don't perform to their ability 'cause of their lack of vocab...So that would be of huge benefit for us going forward'.* (R4).

There was consensus among respondents that a gap exists in the curriculum pertaining to vocabulary learning skills. Teachers felt that students lacked skills '*in actually dealing with the words'* (R1.) and that the programme benefits students by giving them strategies to deal with new words.

> *'Another thing too that I noticed was their ability to deal with new words.... they saw the practical benefit...if they came across a new word, guess or have a go at it, whereas before it would have been Sir, what's this mean?'.* (R1).

Respondents also expressed their concerns that students do not have the skills to access vocabulary in exam

situations and that the taught vocabulary strategies could give students an opportunity '*to boost up their achievement in Junior Cert'* (R2). And the programme has '*given them a platform...to be exam ready'* (R4) and to apply the strategies by '*relating it back to exam situations'* (R7).

(1.b) Breaking down the Barriers to Language Learning

Respondents discussed how the adapted VEP broke down barriers to language learning; this included improving students' confidence in their own skills and abilities and building skills for being able to understand and use language. The consensus was that teachers encouraged all students to '*have a go'* (R1) with new words and achieving success meant:

> '*It raised their confidence a lot'* (R2)
>
> '*Weaker students'* were '*motivated to continue on with the programme'* (R8)
>
> '*It broke a lot of barriers for kids accessing language'* (R4)

'Barriers to learning for students academically underperforming was a recurring issue highlighted bv teachers...'

Barriers to learning for students academically underperforming was a recurring issue highlighted by teachers in this study. The adapted VEP highlighted barriers specifically related to vocabulary.

> '*On a very simple level, it highlighted four or five students in my group that were having difficulties accessing vocabulary, which means now we can look at that and work with them a bit more independently'.* (R4).

(1.c) Multi-Dimensionality of the Programme

Many respondents made reference to the multi-dimensional nature of the adapted VEP and how the students enjoyed many aspects of it.

> '*They loved the individual sessions, the visuals, the structure of it, getting their hand-outs. I suppose the whole organisation of it, that it was part individual, part group work, I suppose they felt they were engaged with it the whole time'.* (R3).
>
> '*The girls engaged with it, they enjoyed it which I always feel is kind of the first hurdle to get over with something when I'm teaching'.* (R1).

'Group work was seen as a positive model of learning...'

Various activities within the programme were mentioned as particularly enjoyable for the students, especially material for learning idioms and figurative language. Group work was seen as a positive model of learning, whereby one teacher noted that '*they loved working in groups'* (R6). It was also reported that concrete activities were well received by the students, helping them engage with difficult material. Teachers working with students who consistently underachieve academically emphasised the need to have more concrete activities within the programme along with visual representations and more content relevant to the curriculum and their educational goals.

(1.d) Opportunities for Expanding the Vocabulary Programme

The resource teachers made insightful recommendations regarding the use of the adapted VEP with groups of students outside of the first year classes. One resource teacher working with a senior 'learning support' group found that their essay writing structure benefitted from principles of the programme. She remarked that the senior group was able to engage in '*higher level thinking because they were that little bit older*' (R7). This teacher also suggested that aspects of the programme should be reintroduced every year to ensure the maintenance of skills occurs. Within a mainstream class group, one teacher found that the students learning English as an additional language (EAL) '*absolutely loved the programme*' (R5). Another resource teacher who used aspects of the programme when working with EAL students said:

> '*There is scope for adding in your own extra lessons to it if you wish...you could work at a slower pace for students that don't have English as their native language*'. (R8).

2. The Challenging Features of the adapted VEP

Figure 4: The Challenging Features of the Adapted VEP
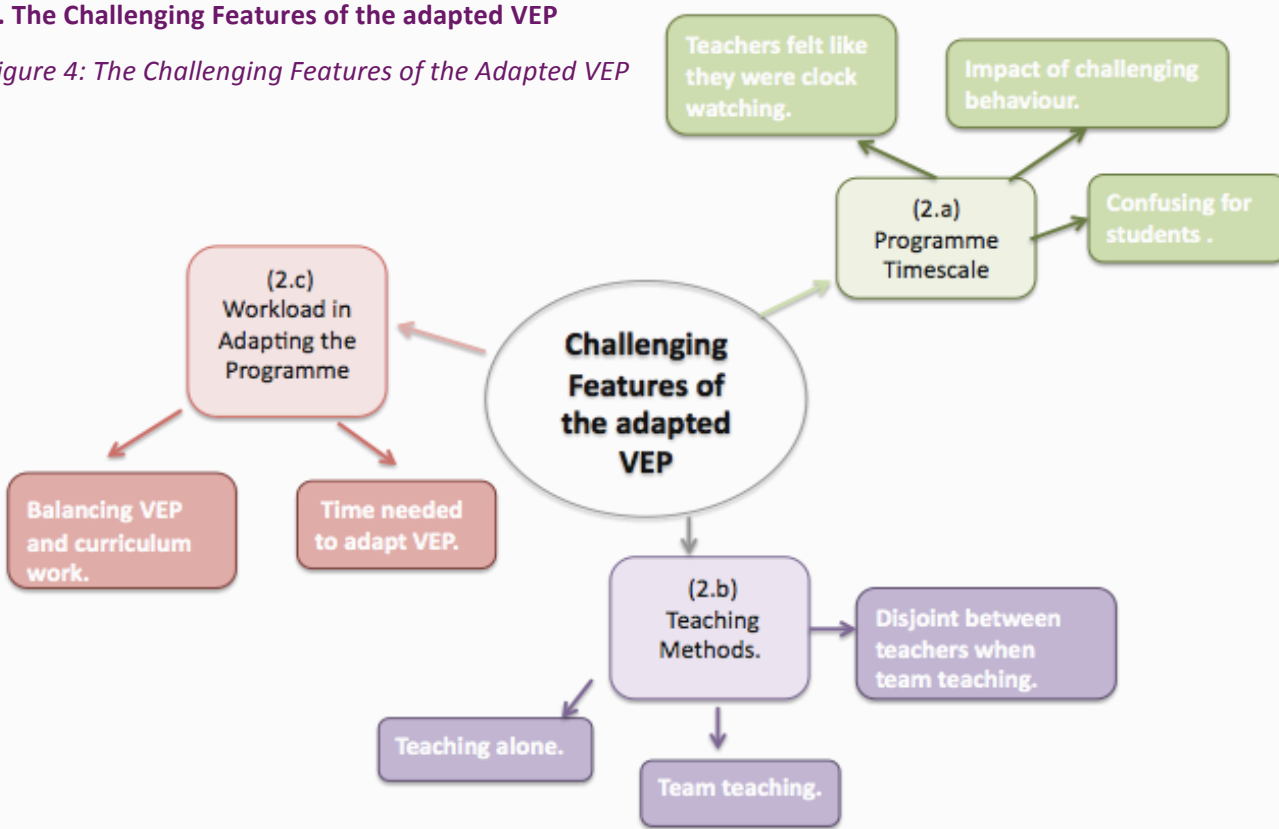
(2.a) Programme Timescale

For these schools, the adapted VEP was implemented over a 12 week period with two classes per week dedicated solely to its delivery. All respondents had concerns about the timescale of the programme; however there was no consensus on the ideal length of the programme. The majority of respondents did agree that certain units within the programme were rushed.

> '*At times it definitely did feel very rushed...just trying to tick all the boxes there, which you know usually is something I don't like to do, but for the sake of this I was trying to make sure everything was done*'. (R1).

'**...the adapted VEP was implemented over a 12 week period with two classes per week.**'

'The group of students I was working with were quite challenging and I just felt that time wise it was quite difficult to deliver the programme effectively'. (R8).

Some teachers identified that they felt the programme would be more effective run over the whole of first year and others mentioned condensing the programme into six weeks.

(2.b) Teaching Methods

One respondent taught the vocabulary programme on his own, while all others shared responsibility for instructing the class with a co-teacher where both teachers implemented the adapted VEP with the class at the same time. The team-teaching method was favourably viewed as co-teachers provided support within the classroom environment which impacted classroom management and student enjoyment of the classes.

'I think that in terms of support...like making sure that the course went smoothly and classroom management was obviously a lot better as a result of having two teachers than one'. (R8).

The teacher who implemented the programme individually felt he had classroom management difficulties. He believed that these difficulties impacted on students' learning:

'If I was explaining it I was losing them basically.... classroom management issues which kind of interfered with the delivery of the programme'. (R4).

Continuity in teaching was an issue raised by teachers affected. A number of teachers taught one vocabulary class a week, while the second class was taught by a different teacher. One teacher used the term 'disjoint' (R1) to describe his experience of not teaching continually. He felt as if he was 'going in blind on some occasions', as he did not know which students were having difficulty with specific content. Another teacher felt as if she never 'got a momentum with the class' (R2). The consensus was that this practice made the implementation disjointed and was unfulfilling for teachers as they could not complete whole sections.

(2.c) Workload in Adapting the Programme

A number of teachers raised the issue that there was extra work involved in delivering the adapted VEP, along with the curriculum. In particular, teachers working with students who were consistently underperforming academically completed extra work to adapt the programme to their students' academic abilities. Two teachers noted:

'I found it very top heavy, I found that there was an awful lot of work to do.' (R5).

'I was going in on a need to know basis...because I was so busy preparing classes'. (R6).

For some respondents making the adapted VEP accessible for their students was time consuming. Despite this many participants remarked that the additional resources provided by the NBSS senior speech and language therapist was of huge benefit as it lessened the amount of time they had to spend preparing materials. Baxendale et al., (2013) state that teachers are positive regarding speech and language therapists providing clear structures for a classroom intervention.

3. Significance of Support

Figure 5: Outline of Theme: Significance of Support during the adapted VEP
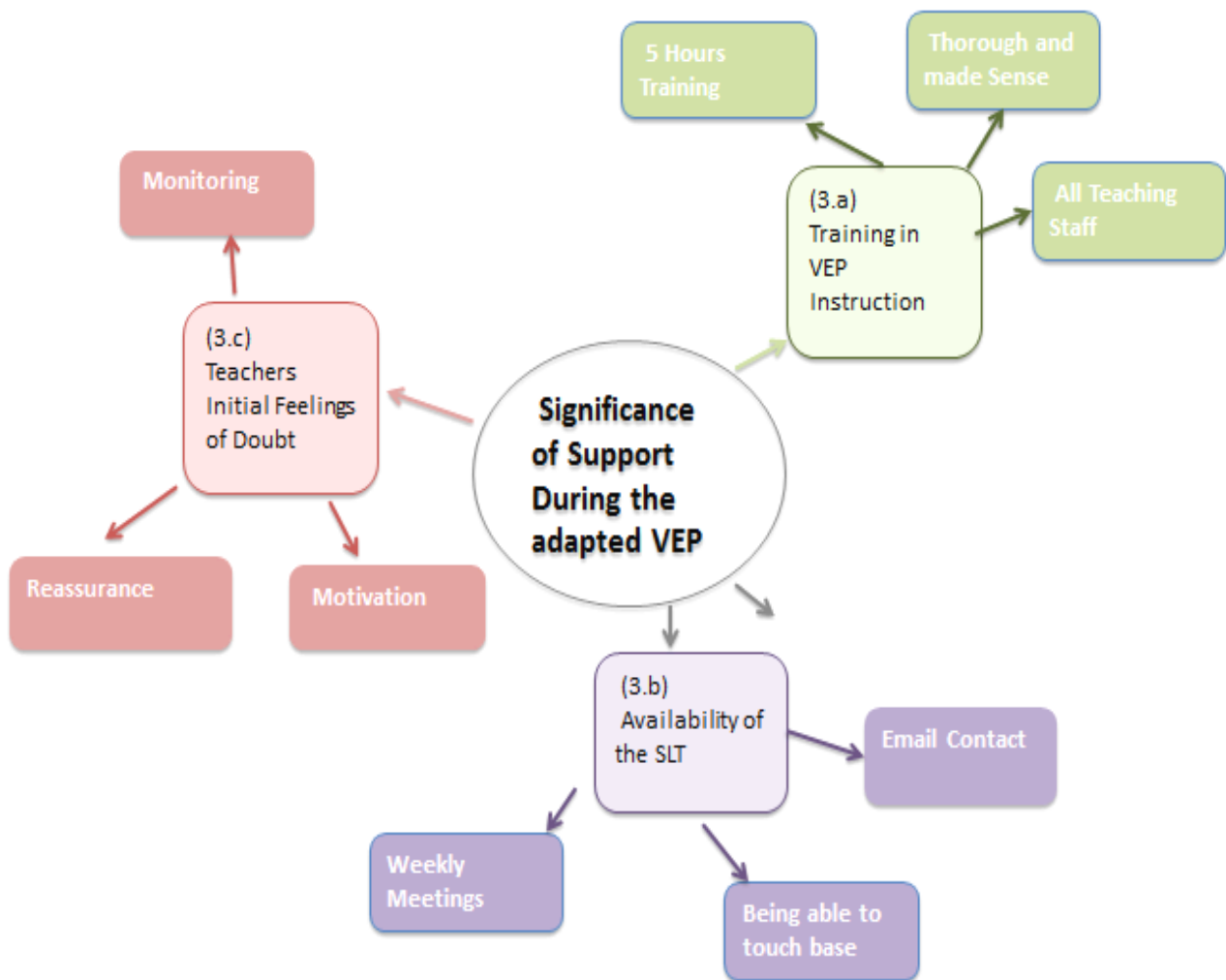
(3.a) Training

Teachers highlighted that the initial training was of benefit and important.

> *'After receiving the training from the SLT overseeing the programme, the programme 'just completely made sense to me' (R1).*

> *'The introduction programme at the start laid it out perfectly for us; we knew exactly where we stood'. (R4).*

The education of staff members outside of the core group implementing the programme was also beneficial:

> *'It was great that all staff knew about it because (the SLT) came in and did a presentation to staff about speech, language and communication needs'. (R3).*

Previous research by Baxendale et al., (2013) suggests that teachers' knowledge about the nature of children's language difficulties increases after a collaborative teacher/SLT school-based intervention. The current findings imply that training for all teachers is important. Successful training is integral for any language programme. This concurs with findings from Dockrell and Lindsay (2001) who discuss how

teachers' understanding of language impairment is limited. Support and information thus need to be provided by SLTs to lay a foundation for effective collaborative intervention.

(3.b) Availability

The availability of the SLT support was a positive feature of the programme. The multi-modal nature of support was highlighted (the SLT was contactable by email or phone during the week, as well as spending time in the school one day per week):

> 'If there was anything at all we needed [we got] in contact with her…we were well supported'. (R1).

> '(The VEP SLT) was there on a weekly basis...we could always touch base and I knew the issues would be grand'. (R4).

This flexibility in collaborative practice is highlighted by Gascoigne (2006) who describes that the variance involved in the role of the SLT within the school environment, depends on the needs of the situation. Previous research suggests that inefficient support can hinder effective collaboration. In the current study, dynamic, co-equal, interdependent interactions between the teachers and the SLT contributed to an effective school-based collaboration.

(3.c) Initial Feelings of Doubt

A number of respondents made explicit references to their own personal uncertainties in running the adapted VEP. Comments illustrating this concern included the following:

> 'Even though we are trained to teach, we aren't sure we are doing it right'. (R4).

> 'Kind of felt that you were being monitored, so there was no opportunity for slacking'. (R2).

> 'It wasn't like you felt you were being tested or you didn't deliver the lesson well, it was more like feedback...it gives you more motivation for the following week.' (R8).

'The importance of peer support was recognised as an important factor by respondents.'

Wright and Kersner (2001) suggest that joint working can reduce stress on individual professionals as they share concerns and gain professional support from each other. The interview data suggest that despite teachers' initial feelings of doubt, support from peers and SLT acted as a positive buffer to this uncertainty. The importance of peer support was recognised as an important factor by respondents. Within their departments, teachers adapted resources that were 'shared among each other' (R1). Peer support among the teachers implementing the programme within their schools meant that they talked about the adapted VEP. One teacher highlighted that 'the teachers involved in it were very focused in it and…we did discuss it' (R7). This teacher referred to the group as a 'team'.

Discussion

RESEARCH QUESTION ONE

The findings from the adapted VEP research project demonstrate the efficacy and effectiveness of the adapted VEP programme within an Irish context for improving students' vocabulary skills and abilities. Analysis of the standard scores at pre-intervention stage found that in both groups approximately 56.6% of students scored in the difficulties range on all vocabulary assessments and subtests used. This illustrates the high level of oral vocabulary difficulties adolescents from areas of socioeconomic disadvantage present with and is consistent with previous prevalence reports of SLCN in areas of socioeconomic disadvantage at 50-80% (Locke et al., 2002; Sage 2005; Spencer et al., 2012). This finding alone strongly emphasises the need for whole school approaches to vocabulary learning within a context of more integrated supports for those who need it.

Significant improvement was measured by a greater increase in raw scores across all standardised measures in the intervention schools than the control schools. This suggests that the intervention was successful in improving students' receptive knowledge of vocabulary, understanding of semantic relationships between vocabulary terms, expressive ability to explain semantic relationships between vocabulary, word definition skills

> **'Significant improvement was measured by a greater increase in raw scores across all standardised measures in the intervention schools than the control schools.'**

and their ability to name members of semantic groups. These improvements were made on standardised tests of language, not specific tests of skills taught in the programme, which further indicates that this intervention, targeting vocabulary strategies and skills, can improve students' overall oral language skills and knowledge.

The effectiveness of the intervention in increasing students' language abilities relative to age matched peers was highlighted through improvement on standard scores of vocabulary significantly greater than the control schools on three of the four standardised measures (word classes receptive, word classes expressive and the BPVS-3). This further illustrates that the adapted VEP is effective in improving students' overall language abilities.

This improvement on overall oral language skills supports previous recommendations that schools in areas of socioeconomic disadvantage should be supported on a whole-school basis (Spencer et al., 2012).

Providing whole class interventions to all first year students and incorporating it into their regular English class has several benefits. It anchors the intervention in curricular based language and ensures vocabulary is targeted in a classroom setting where the majority of vocabulary is acquired during adolescence. It also averts the typical "pull out" treatment strategy where students not only miss class, but may also feel stigmatised due to being singled out from their peers for treatment. (Larson & McKinley 2003; Nippold 2007).

'...improvement on overall oral language skills supports previous recommendations that schools in areas of socioeconomic disadvantage should be supported on a whole-school basis.'

Interesting findings were identified in looking for factors that may have impacted improvement. The intervention group scored significantly lower than the control group at pre-intervention stage on word classes receptive and word associations but these differences were not evident post-intervention, meaning the intervention group 'caught up' with the control group for these measures. There was no significant difference between the intervention and control group at pre-intervention on three of the measures (word classes expressive; word definitions; BPVS-3); this indicates real improvement made by the group on these measures, not just catching up. Unfortunately analysis on the impact of gender on improvement was not possible due to an all-female control group. Further research studies need to include a mixed gender control group.

RESEARCH QUESTION TWO

Interviews with post-primary school teachers who implemented the adapted VEP illuminate the personal experiences of implementing a whole class vocabulary programme in terms of:

1. The positive and challenging features of the adapted VEP.
2. The perceived barriers and facilitators of implementing the programme and potential benefits teachers gain from successfully implementing the adapted VEP.
3. The factors that facilitate or hinder collaborative practice with speech and language therapists (SLTs) and teachers within the post primary educational setting.

'...student improvement in the area of vocabulary as identified through the standardised vocabulary measures used but made compelling through the findings from teacher interviews.'

It is clear from the feedback that there were many positive features of the adapted VEP. These included student improvement in the area of vocabulary as identified through the standardised vocabulary measures used but made compelling through the findings from teacher interviews. Analysis identified a strong recognition from teachers that the programme was something novel, useful and necessary in terms of supporting students' vocabulary development. It also highlighted that a programme using multimodal learning strategies was very motivating for students and subsequently that the programme was flexible enough to apply not only to first year whole class provision but also to small groups and individuals

across the post primary cycle (junior and senior). Teachers reported that they felt it would be beneficial to review strategies covered in the programme at later times in order to build sustainability and application across all curricular areas.

There were also some challenging features. Teachers reported that they found it difficult to complete the work in the given class periods. Time constraints meant that some teachers felt they could not:

- Address all the activities within the sessions
- Ensure students fully understood concepts and strategies
- Allow students enough time to reflect and embed information

Many teachers recommended changing the timeline but there was little consensus from participants on how to do so. This demonstrates that flexibility is needed in running the adapted VEP programme with whole class groups, where working at the pace of the class is integral. Similarly, adapting the content was seen as a challenge. Despite this, many teachers reported they would find it easier to run a second time and that the adapted session plans which included PowerPoints and worksheets were invaluable in running the programme.

Team teaching was seen as a strong positive feature of running the programme in terms of supporting oral language, small group and active learning activities. The one teacher who did not team teach reported that he found the diverse learning strategies and use of oral work and group/peer work difficult to handle with classroom management. Interestingly when there was a disjoint in teaching, it impacted the running of the programme. Thus teachers who team taught recommend that the same teachers teach every session for continuity.

Lastly, teachers highlighted the importance of collaborative support throughout the programme. The initial training and weekly meetings provided teachers with ample support to implement the adapted VEP. Peer support was highlighted in terms of sharing resources and ideas as a factor in reducing teachers' uncertainty about their ability to implement the programme. Planning time was identified as necessary to not only to implement the programme but also needed for teachers to support each other and to meet collaboratively with a SLT.

This study demonstrates how speech and language therapists can support teachers to address the language learning needs of students in post-primary school in areas of socioeconomic disadvantage. The study illustrates that teachers can implement this programme with proper training and support but also, importantly, that the adapted VEP is an intervention which is both efficacious and effective in improving the oral vocabulary skills of first year students in Irish post-primary schools.

Recommendations & Conclusion

RECOMMENDATIONS

Over the course of this research project a range of recommendations have been highlighted as important in promoting the successful running of the adapted VEP at whole class level in post-primary schools. The NBSS will endeavour to support implementation of the following, for its partner schools:

- English and Resource/Behaviour for Learning (BfL) teachers who are to run the programme in each school need to attend a comprehensive (4-5 hour) training session run by a speech and language therapist or literacy specialist.

- All staff in schools running the programme need to attend a short 30-60 minute continuing professional development (CPD) session explaining the programme, its aims, scope and strategies taught within the programme.

- The programme is best run between 12-16 weeks depending on the level of the particular class.

- Throughout the initial running of the programme in a school there needs to be regular and direct contact with the speech and language therapist or literacy specialist for support and guidance.

- Teachers need to be given time to plan and prepare the intervention individually or with peers, particularly those teaching classes with a diverse range of abilities and needs.

- Teachers need to be given the opportunity to team teach the programme in a structured way, where there is always one constant teacher for consistency.

- In order to support sustainability, there needs to be resources and time provided to teachers to re-address the skills and strategies taught in the programme in English and other subjects.

This intervention research project (combined with previous NBSS research) has further highlighted the level of oral language difficulties adolescents in post-primary schools in areas of socioeconomic disadvantage present with. The following recommendations, grounded in the research findings are:

- Inclusion of speech, language and communication needs training in Continuous Professional Development training for post-primary school staff, initial teacher education and newly qualified teachers.

- Collaborative multidisciplinary working of speech and language therapists and teachers in post primary schools in order to support language and literacy development at whole school level.

CONCLUSION

In conclusion, the adapted VEP intervention has been found to be effective when taught at whole class level in the post-primary school setting. The programme supports development of receptive and expressive oral vocabulary skills. It cannot be taken for granted that all adolescents will develop these skills innately as 56.6% of students who took part in this study presented vocabulary difficulties on entry to post-primary school.

The study creates a foundation for further research in this area so that the whole class method of service delivery can be used as an evidenced based intervention to target vocabulary skills across schools in areas of socioeconomic disadvantage. The study also describes a highly successful collaboration between teachers and SLTs, where teacher directed and SLT supported intervention improved students' language abilities. This study's findings give a strong indication that the adapted VEP can significantly develop the oral language skills of adolescents in mainstream post primary schools in areas of socioeconomic disadvantage in Ireland.

ACKNOWLEDGEMENTS

References

Baumann, J. F., Kame'enui, E. J., & Ash, G. E. (2003). Research on vocabulary instruction: Voltaire redux. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts*: *2nd ed.* (Mahwah, NJ: Lawrence Erlbaum Associates) pp. 752–785.

Baxendale, J., Lockton, E., Adams, C. and Gaile, J. (2013) 'Parent and teacher perceptions of participation and outcomes in an intensive communication intervention for children with pragmatic language impairment', *International Journal of Language & Communication Disorders*, 48(1), 41-53.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing Words to Life: Robust Vocabulary Instruction,* New York: The Guilford Press

Bishop, D. V. M. (1997) *Uncommon Understanding: Development and Disorders of Language Comprehension in Children*, Hove: Psychology Press.

Bohanon, H. et al. (2006) Schoolwide Application of Positive Behaviour Support in Urban High School:A Case Study. *Journal of Behavior Intervention, 8 (3), 131-145*

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative research in psychology*, 3(2), 77-101. Bryant, D. P., Goodwin, M., Bryant, B. R. and Higgins, K. (2003) 'Vocabulary instruction for students with learning disabilities: A review of the research', *Learning Disability Quarterly*, 117-128.

Bulotsky-Shearer, R. J**.**, & Fantuzzo, J.W. (2011). *Preschool behavior problems in classroom learning situations and literacy outcomes in kindergarten and first grade.* Early Childhood Research Quarterly, 26, 61-73.

Byrne, D., & Smyth, E. (2010). *No Way Back? The Dynamics of Early School Leaving.* Dublin: The Liffey Press in association with the Economic and Social Research Institute.

Carr, E. et al. (2002). Positive benavior support: Evolution of an applied science. *Journal of Positive Behavior Interentions, 4(1),* 4-16.

Clark, E. V. (2003) *First Language Acquisition*, Cambridge: Cambridge University Press.

Cunningham, A. E., and Stanovich, K. E. (1997) 'Early reading acquisition and its relation to reading experience and ability ten years later', *Developmental Psychology,* 33(6), 934-945.

Department of Education and Skills (2012). *A Framework for Junior Cycle,* Dublin.

Department of Education and Skills (2011). *Literacy and Numeracy for Learning and Life: The National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020,* Dublin.

Dockrell, J. & Lindsay, G. (2001). Children with specific speech and language difficulties – the teachers' perspective. *Oxford Review of Education*, 27 (3), 369–392.

Dockrell, J. R and Messer, D. (2004) 'Lexical acquisition in the early school years', in Berman, R., eds., *Language development across childhood and adolescence*, Amsterdam: John Benjamins Publishing, 3, 35-52.

Duffy, H. & Scala, J. (2012). *A Systemic Approach to Implementing RTI in Three Colorado High Schools,* Washington, DC: National High School Center

Dunn. L.M., Dunn, D.M., Sewel, J. & Styles, B. (2009). *The British Picture Vocabulary Scale (BPVS-3): Third Edition.* London: GL Assessment Ltd.

Ebbers, S.M. and Denton, C A. (2008) 'A root awakening: Vocabulary instruction for older students with reading difficulties', *Learning Disabilities Research & Practice,* Vol 23(2) 90-102

Ehren, B.J., Deshler, D.D. & Graner, P.S. (2010). Using the Content Literacy Continuum as a framework for implementing RTI in Secondary School. *Theory into Practice, 49(4),* 315-322.

Fielding, N. and Thomas, H. (2008) 'Qualitative interviewing', In Gilbert, N., eds., *Researching social life*, 3rd ed., Great Britain: Sage Publications, 245-265.

Fuchs, D. & Fuchs L.S. (2006). Introduction to responsiveness-to-intervention: What, why, and how valid is it? *Reading Research Quarterly, 4*, 93–99.

Gathercole S (1993) Word learning in language-impaired children. *Child Language Teaching and Therapy* 9(3): 187–99.

Gascoigne, M. (2006) 'Supporting children with speech, language and communication needs within integrated children's services', *RCSLT Position Paper*. London, UK: Royal College of Speech and Language Therapists.
Hawken, L.S. & Horner, R.H. (2002). *Evaluation of a targeted group intervention within a school-wide system of*

behaviour support. Eugene, Oregon: University of Oregon

Joffe, V.L. (2006). Enhancing Language and Communication in Language-impaired Secondary School-aged Children. In J. Clegg & J. Ginsborg (Eds.), *Language and socioeconomic disadvantage: Theory into practice*. (West Sussex: Wiley) pp. 207-216.

Joffe, V.L. (2011). *Vocabulary Enrichment Programme,* Milton Keynes, UK: Speechmark Publishers.

Joffe, V. L. & Nippold, M. A. (2012). Progress in understanding adolescent language disorders. *Language, Speech, and Hearing Services in Schools*, 43 (4), 438-444.

Larson, V. L. & McKinley, N. L. (2003). Service delivery options for secondary students with language disorders. In *Seminars in Speech and Language,* 24 (3) 181-198.

Lane, K. et al., (2009). Developing Schoolwide Programs to Prevent and Manage Problem Behaviors. New York, NY: Guildford Press.

Lewis, T.J. & Sugai, G. (1999). Effective Behavior Support: A systems approach to proactive school-wide management. *Focus on Exceptional Children 31(6),* 1-24; L.

Lesaux, N. K., Kieffer, M. J., Faller, S. E. & Kelley, J. G. (2010). The effectiveness and ease of implementation of an academic vocabulary intervention for linguistically diverse students in urban middle schools. *Reading Research Quarterly*, 45 (2), 196-228.

Lindsay, G., Dockrell, J., Desforges, M., Law, J. and Peacey, N. (2010) 'Meeting the needs of children and young people with speech, language and communication difficulties', *International Journal of Language & Communication Disorders*, 45(4), 448-460.

Locke, A., Ginsborg, J. and Peers, I. (2002) 'Development and disadvantage: implications for the early years and beyond', *International Journal of Language & Communication Disorders*, 37(1), 3-15.

Martin, M. (2006). School Matters: The report of the Task Force on Student Behaviour in Second Level Schools. Dublin. Available at:
http://www.sdpi.ie/other_des_publications/Task%20force%20on%20Student%20Behaviour%20Final%20Report%20School%20Matters_2006.pdf

McEvoy, A., & Welker, R. (2000). *Antisocial behavior, academic failure, and school climate: A critical review.* Journal of Emotional and Behavioral Disorders*, 8*(3), 130-140

McIntosh, B., Crosbie, S., Holm, A., Dodd, B. & Thomas, S. (2007). Enhancing the phonological awareness and language skills of socially disadvantaged pre-schoolers: An interdisciplinary programme. *Child Language Teaching and Therapy*, 23 (3), 267-286.

McPeak et al. (2007). *The secondary literacy instructions intervention guide: Helping school districts transform into systems that produce life-changing results for all children.* Mill Valley, CA: The Stupski Foundation.

Miles, S.B., & Stipek, D. (2006). *Contemporaneous and Longitudinal Association between Social Behaviour and Literacy Achievement in a Sample of Low Income Elementary School Children.* Child Development, 77(1), 103-117.

Nagy, W. E., Herman, P. A., and Anderson, R. C. (1985) 'Learning words from context', *Reading Research Quarterly,* 20, 233-253.

Nagy, W. E. & Scott, J. A. (2000). Vocabulary Processes. In M.L. Kamil, P.B. Mosenthal, & r. Barr (Eds.), *Handbook of Reading research* (*Vol. 3, pp. 269-284). Mahwah NJ: Erlbaum.*

Nash, H., & Snowling, M. (2006, May 1). Teaching new words to children with poor existing vocabulary knowledge: A controlled evaluation of the definition and context methods. *International Journal of Language and Communication Disorders, 41(3), 335–354.*

Nippold, M. A. (2007). *Later Language Development: School-age Children, Adolescents and Young Adults.* (Austin, TX: Pro-Ed.)

Nippold, M. A., and Sun, L. (2008) 'Knowledge of morphologically complex words: A developmental study of older children and young adolescents', *Language, Speech, and Hearing Services in Schools*, 39(3), 365-373.

Parsons, S., Law, J. and Gascoigne, M., (2005), Teaching receptive vocabulary to children with specific language impairment: a curriculum-based approach. *Child Language Teaching and Therapy*, **21**(**1**), 39–59.

Sage, R. (2005). Communicating with Students Who Have Learning and Behaviour Difficulties: A continuing professional development programme. *Emotional and Behavioural Difficulties*, 10 (4), 281-297.

Semel, E., Wiig, E.H. & Secord, W.A. (2006). *Clinical Evaluation of Language Fundamentals: Fourth edition, (CELF 4)* Harcourt Assessment

Spencer, S., Clegg, J. & Stackhouse, J. (2012). Language and disadvantage: a comparison of the language abilities of adolescents from two different socioeconomic areas. *International Journal of Language & Communication Disorders*, 47 (3), 274-284.

Spencer, S., Clegg, J. and Stackhouse, J. (in review) Investigating the contribution of language ability to variation in adolescents' educational attainment in a context of socioeconomic disadvantage.

Starling, J., Munro, N., Togher, L. & Arciulia, J. (2012). Training secondary school teachers in instructional language modification techniques to support adolescents with language impairment: A randomized control trial. *Language, Speech, and Hearing Services in Schools,* 43, 474–495.

Sugai, G. & Horner, R.H. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child and Family Behavior Therapy,* 24, 23-50.

Throneburg, R., Calvert, L. K., Sturm, J. J., Paramboukas, A. A. & Paul, P. J. (2000). A comparison of service delivery models: Effects on curricular vocabulary skills in the school setting. *American Journal of Speech-Language Pathology*, *9*, 10-20.

Trzeniewski, K.H., Moffitt, T.E., Casp, A., Taylor, A., & Maughan, B. (2006). *Revisiting the Association between Reading Achievement and Antisocial Behaviour – New Evidence of an Environmental Explanation from a Twin Study.* Child Development, 77(1), 72-88.

Valiente, C., Lemery-Chalfant, K., & Swanson, J. (2010). *Prediction of kindergartners' academic achievement from their effortful control and emotionality: Evidence for direct and moderated relations.* Journal of Educational Psychology, 102(3), 550-560.

Wilson, G., Nash, M. and Earl, G. (2010) 'Supporting students with language learning difficulties in secondary schools through collaboration: The use of concept maps to investigate the impact on teachers' knowledge of vocabulary teaching', *Child Language Teaching and Therapy*, 26(2), 163-179.

Wright, J. and Kersner, M. (2001) *Supporting Children with Communication Problems: Sharing the Workload*, London: David Fulton Publishers.

National Behaviour Support Service (NBSS)

Navan Education Centre

Athlumney

Navan

Co. Meath

Telephone: +353 46 909 3355

Fax: +353 46 909 3354

Email: nbss@ecnavan.ie

Website: www.nbss.ie