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Effective intervention to support oral language skills in English as an additional language in the early years

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Abstract

Increasingly, children enter Early Childhood Education and Care (ECEC) settings with English as an additional language (EAL) and for many of these linguistically diverse children, their knowledge and skills in the English language is less-well developed than native-speaking (NS) peers. Much research over the past few decades has indicated how important early language and emergent literacy development is within ECEC settings, as children's skills in these domains underpins later literacy development and academic achievement. Furthermore, many children from linguistically diverse backgrounds tend to have less well-developed vocabulary knowledge and struggle with aspects of literacy later on. In this paper we present the findings of a Professional Development (PD) intervention study aimed at helping teachers to develop and implement effective strategies that support oral language skills in both EAL and NS pupils. We discuss these findings in relation to two other oral language interventions where the focus was on working directly with pupils. We argue that whereas evidence suggests interventions working directly with pupils can be more effective on improved child language outcomes, we need to focus more energy on developing good PD for Early Years Practitioners to support them in their critical roles in children's educational development.

Keywords: *EAL; Early Years; Vocabulary; Intervention*

1. Introduction

Bilingualism is the norm where some estimates suggest that over half the world's population speaks more than one language (Grosjean 2014). Just over half of Europeans are able to hold a conversation in more than one language, where 25% can speak three languages and 10% more than three (European Commission 2012). In Ireland, approximately 13% of the population overall identify as multilingual and speak a language other than Irish or English in the home (Irish Census 2016). Additionally, Ireland has (at least) 72 different languages identified as being spoken apart from Irish or English and these statistics together lead to an estimate that approximately a minimum of three children per classroom will be multilingual. England, the context from which the research in this paper is drawn, is no different in terms of linguistic diversity. Approximately 20% of the primary school population have English as an Additional Language (EAL) (DfE, 2016). For large proportions of children with EAL, their first formal exposure to English is through their initial experiences with formal education, and specifically, through Early Childhood Education and Care (ECEC) settings. It is important then, to fully understand the unique issues and potential challenges linguistically diverse children face so that we can offer them the best possible start - a particular concern given research has repeatedly shown that the early years are the 'most important grade' given its considerable influence on later academic achievement (Barnett & Hustedt 2003).

Early Childhood Education and Care (ECEC) settings can help children develop in a number of different domains as identified by the UK Government's Early Years Foundation Stage (EYFS) (DfE 2017). One of the six areas of development in the EYFS is language and literacy. The overarching aim of this paper is to discuss some key findings in relation to the development of English language and literacy in children with EAL to identify and better understand areas of strength, comparative weakness, and good practice for multilingual pupils as they begin school. The focus will be on educational intervention studies that have attempted to improve key outcomes in pupils' language and emergent literacy. We discuss two oral language interventions with young EAL pupils and then present a brief report of a Professional Development (PD) intervention we carried out. Oral language is the focus of these interventions because, as shall be clear in the discussion of relevant literature below, oral language skills are a crucial determinant of children's literacy. The research described in this paper focuses on England simply because that is the context in which these studies were carried out but the extent to which these issues are relevant in other contexts is an important issue.

Children's vocabulary knowledge is an important predictor of their later literacy development (Carroll, Bowyer-Crane, Duff, Hulme & Snowling 2010). Indeed, the quality of literacy experiences that children have had since birth (both at home, and in ECEC) predict achievement later on (Justice, Chow, Capellini, Falnigan & Colton 2003; Levy, Gong, Hessels, Evans & Jared 2006; Storch & Whitehurst 2002). However, there is a significant amount of diversity with respect to children's vocabulary, language, and communication skills as they begin this important phase of their development. Some children have relatively little knowledge of English which impedes their ability to fully engage with their experiences within ECEC. Given the close connection between a child's skill in English language in determining their later achievement it is unsurprising that in many studies children with EAL have been found to lag behind non-EAL peers in key areas of vocabulary and emergent literacy. (August & Shanahan 2006; Cameron 2002; Hart & Risley,1992; Murphy 2014; Murphy 2018; Strand, Malmberg & Hall 2015). Indeed, an analysis of the 2013 National Pupil Database comparing children with EAL against non-EAL children in terms of academic performance found that the gaps between these two groups of pupils is widest at the early years phase of education (Strand et al. 2015). This outcome is unsurprising given many children with EAL will not have had as much cause to develop English language skills prior to school entry. These findings generally highlight how important it is that we understand the most effective ways of supporting linguistically diverse pupils' emergent literacy skills in ECEC settings. Intervention studies are considered by many to be among some of the most powerful ways of identifying 'what works' in supporting key aspects of children's development (Connolly 2009; Hanley, Chambers & Haslam 2016). It is precisely because such studies enable the researcher to examine causal relationships between what the practitioner is doing in the classroom context and key outcomes that we have adopted the approach hereafter reported in this document. Before discussing this intervention research, however, it is useful to consider first what research has revealed regarding what linguistically diverse children can and cannot do with respect to vocabulary and reading before delving into more detail in intervention studies aimed at improving children's second language (L2) outcomes.

The Simple View of Reading (SVR) (Gough & Tunmer 1986) has argued that reading can be considered as a product of two sets of skills: decoding and comprehension. Decoding skills enable the child to read single words on a page accurately and fluently whereas comprehension

skills include listening and reading comprehension processes (Hoover & Tunmer 1993). Much research has been carried out within the context of the SVR and some has been applied to linguistically diverse pupils (see Murphy 2018 for a review). Decoding skills involve knowledge across a range of domains, including orthography, phonology, lexis, morphology and syntax, and where children must understand the 'alphabetic principle' where the sounds of language can be understood to map on to specific graphemes (in alphabetic scripts). A consistent finding across a range of studies has identified that decoding skills are an area of comparative strength for linguistically diverse pupils generally, and pupils with EAL specifically (see Murphy 2018). Difficulty arises for many pupils with EAL however in examining the second component of the SVR, which involves listening and reading comprehension. Children with EAL often under-perform relative to non-EAL peers on measures of listening (McKendry & Murphy 2011) and reading comprehension (e.g., Melby-Lervåg & Lervåg 2014). There are many candidate reasons for lower skills in reading comprehension, but the well-researched relationship between vocabulary knowledge and reading comprehension (e.g., Nation, Clarke, Marshall & Durand 2004; Nation & Snowling 2004; Nation, Cocksey, Taylor & Bishop 2010) and the fact that many children with EAL have less (English) vocabulary knowledge than non-EAL peers (e.g., Cameron 2002; Bialystok, Luk, Peets & Yang 2010; Mahon & Crutchley 2006) points to vocabulary knowledge as being a key issue that educators should spend time developing, particularly in the early years.

The comparative strength of pupils with EAL on decoding-related skills relative to vocabulary and oral language was also observed in the *Effective Provision of Pre-School Education* (EPPE) study. The EPPE study was the first major European longitudinal study of a national sample of young children's development between the ages of three and eighteen years. (Sylva, Melhuish, Sammons, Siraj-Blatchford & Taggart 2011). The sample included over 3000 children recruited across England from 141 different ECEC and home settings who were followed through primary school and on into secondary. Eleven percent of the sample at school entry had EAL, (i.e., more than 300 pupils). The general method of the EPPE study was to interview parents at recruitment to document family demographics and the frequency of various home learning and play activities. 141 pre-school centres were also observed using the ECERS-R (Early Childhood Quality Environment Rating scale) and its British curricular and pedagogical extension, the ECERS-E. There are many important findings from this large-scale study but for the purposes of this paper a few are particularly worth highlighting. Code-related

skills, which are associated with children's letter recognition and phonological awareness, were measured at age five, along with children's oral language skills (which included verbal comprehension skills and naming vocabulary). EAL children performed better than their non-EAL peers on code-related skills, but significantly worse on oral language skills. Furthermore, specific pedagogical practices (such as the use of key resources in addition to structured teaching) predicted children's code-related skills, however, no predictors from ECEC settings predicted oral language skills. This finding highlights the importance of understanding what can be done effectively within the early years to support linguistically diverse pupils' oral language and in particular their vocabulary skills, as a) we know that this is an important predictor of developing literacy and b) is something that the EPPE study found was not adequately supported within the context of ECEC. Consequently, this paper now turns to some key intervention studies, which were aimed specifically at improving young EAL children's oral language skills in ECEC settings.

The 'Talking Time' intervention (Dockrell, Stuart & King 2010) is an oral language intervention comprising three specific activities meant to be carried out in small groups: i) Acting out – a series of dramatic activities with specific target vocabulary; ii) Story Talk – aimed at supporting children in talking about pictures in a book they were looking at and drawing parallels with their own experiences; and iii) The Hexagon Game – which provided children with a visual stimulus to help support the construction of narratives. These activities were carried out for 15 minutes, twice a week over a 15-week period. Teachers were encouraged to use open questions and expand or recast children's utterances, thus also providing a richer source of interaction and linguistic diversity. Teachers were also encouraged to model language structures that children were not yet using in their productive speech. The children in the study were three to five-year old pupils attending inner city nursery schools. Within the Talking Time group there were 46 children, 91% of whom were EAL, and in the comparison (control) group, there were 100% EAL in the sample of 37 children. The Talking Time intervention improved children's language skills on verbal comprehension, naming vocabulary and sentence repetition (some of the key outcomes at post-test). This intervention study illustrated that small, group-structured activities where each child had an ample opportunity to speak can help children develop their oral language skills. Staff modelling language is also an important source of support for children's activities, and is especially important for activities which promote discussion, acting out, interactive games, and the use of

visual resources. Offering young EAL pupils the support they need to practice their developing oral language skills in well-structured small group activities, therefore, has empirical support as an effective pedagogical method (Dockrell et al. 2010).

Fricke and Millard (2016) present another example of an intervention aimed at improving oral language skills in young EAL children in England. They investigated whether an intervention aimed specifically at listening, vocabulary, and narrative skills might improve oral language skills in three-and four-year old children. 96 children were randomly assigned to either an intervention or a waiting control group. The measures used in their study included object naming, comprehension and verbs, a standardised measure of expressive vocabulary and sentence structure, a picture story retelling task – aimed at providing children's narrative discourse, and finally, a random selection of target words that were used in the intervention and were measured both receptively and productively. The intervention was carried out over a 15-week period in three 20-minute sessions each week and was delivered either by a TA (teaching assistant) or an Early Years Practitioner (EYP) who had received some training from the researchers. The overall results revealed an effect of the intervention on taught vocabulary (the targeted words) illustrating that rich and robust vocabulary instruction which provides multiple encounters with target words and opportunities for practice across a range of contexts can be used successfully with children who are EAL. However, there were no advantages of the intervention group on any of the standardised measures.

In both of these interventions (Dockrell et al. 2010; Fricke & Millard 2016), the intervention was primarily focused at the level of the child, where teaching assistants or researchers worked directly with the children, following the intervention protocol. While this is an important approach, it is also useful to examine whether interventions at the level of the teacher, in the form of Professional Development (PD) can have an impact on child language outcomes. We turn to this now.

Professional development (PD) is defined by the National Association for the Education of Young Children (NAEYC) as the "initial preparation and learning experiences designed to improve the knowledge, skills/behaviours, and attitudes/values of the early childhood workforce" (NAEYC 2014, p. 1). PD can be effective in helping young children develop essential literacy skills, but the evidence is mixed in terms of how effective it can be. Wasik

and Hindman (2011) implemented a PD where teachers received conceptual knowledge and instructional strategies aimed at supporting children's vocabulary development, alphabet knowledge, and phonological sensitivity. A comparison group of teachers received PD provided by another program (Head Start). After one year, teachers in the intervention group had provided children with a more enriched literacy environment and higher quality instruction. Perhaps even more importantly, the children who were being taught by teachers in the intervention group had made greater gains on receptive vocabulary and phonological sensitivity (a key feature of emergent literacy). However, such positive effects of PD intervention on children's outcomes are not always found. For example, Gerde, Duke, Moses, Spybrook and Shed (2014) showed that while a PD programme improved literacy practices and knowledge of EYPs, they did not find any improvement on the children's literacy outcomes. Indeed, studies are more consistent in being able to demonstrate that practitioners' knowledge and practice had changed, but there are fewer studies which have explicitly demonstrated the facilitative impact of PD on children's outcomes even though they could be regarded as a key criterion in assessing the overall effectiveness of a PD programme.

Previous research has shown how important it is to provide (and experience) continued in-depth PD, particularly so for early years practitioners (EYPs) as they need specialist knowledge of the building blocks of early literacy and language development. Our study, therefore, evaluated a four-week PD programme (offered two hours a week) to EYPs which aimed to improve the emergent language and literacy development of preschool children. This PD intervention was based on an effective child literacy training programme 'Supporting Parents on Kids' Education' (SPOKES) (Scott et al. 2010; Scott, Sylva, Totsika, Ereky-Stevens, & Crook 2008). The original SPOKES intervention was a group-based programme where parents took part in a range of activities to support their children's language and literacy. For our study, the SPOKES programme was adapted for training with EYPs on a range of techniques to support children to use an active problem-solving approach to developing literacy and language. We did not focus our intervention specifically for how EYPs should work with children with EAL. Rather, we recognised that all children need to develop good language and communication skills in the early years, regardless of their linguistic background and furthermore, most teachers would work in classes consisting of both EAL and non-EAL pupils. We were interested therefore in how the PD would work for both groups.

The research questions of this study were:

1. Do children in the Intervention (PD) group show greater gains in language and literacy development compared to those in the Comparison condition?
2. Do practitioners in the Intervention group show greater gains in language and literacy instructional practices compared to those in the Comparison condition?

2. Method

2.1. Design

This study adhered to a quasi-experimental pre- and post-test design where four childcare centres received the professional training and four comparison nurseries served as a waiting control group and received the intervention after the post-testing was completed. Table 1 illustrates the general design including numbers of participants (both children and EYPs who participated in the study).

Nurseries	WR	BR	MH	JSL	OBP	H	MP	W	Total n
Pre-tests (children)	9	12	14	12	7	10	6	9	79
Post-tests (children)	8	8	13	12	7	8	5	9	70
Training Week 1	√	√	√	√	X	X	X	X	17 participants *
Training Week 2	√	√	√	√	X	X	X	X	15 participants*
Training Week 3	√	√	√	√	X	X	X	X	16 participants*
Training Week 4	√	√	√	√	X	X	X	X	16 participants*

Table 1: Summary of study design

*including managers

2.2. Participants

The intervention involved 35 ECEC staff who worked in University childcare centres and who were compared against ECEC settings that were not part of the University. Approximately 20 EYPS participated in the intervention group with 12 in the comparison group. Seventy-nine

children, all of whom had informed parental consent to participate, (47 three- and four- year olds in the intervention group; 32 three- and four- year olds in the comparison) were recruited for the pre- and post-tests. We did not only include children with EAL as this is not ecologically reliable - 17 children were identified as EAL in the intervention group with 6 EAL in the comparison.

2.3. The PD programme

The intervention was delivered over four two-hour sessions across a four-week period run by three specialist senior trainers who provided support and supervision on a weekly basis across the four weeks where each session adhered to the same structure:

i) sharing aims and agenda
ii) feedback from take-away tasks
iii) one of two main activities
iv) setting the next take-away task
v) book browsing time
vi) Story Reading – where one of the EYPs read their favourite pre-school story in an engaging way.

The participating EYPs received weekly background readings and a take-away task to complete during the week at their ECEC setting.

2.4. Child Outcomes

The children in the EYPs' classes were tested on Naming Vocabulary, a subtest of the British Ability Scales (BAS) (Elliot, Smith & McCulloch 1996) which measures children's productive vocabulary breadth. Children were also tested on Verbal Comprehension (also a subtest of the BAS). We also measured the children's phonological awareness using a task developed by Bryant and Bradley (1985). Finally, the children were tested on the Concepts about Print task (Clay 1989) which assesses what a child knows about the principles involving the directional arrangement of print on the page, their understanding of terminology such as 'word', 'letter',

'beginning of sentence' etc. The book 'Nine Ducks Nine' (Hayes 1990) was used here for this purpose.

2.5. Staff Measure

In order to identify EYPs' attitudes towards the intervention and their understanding of language development, a questionnaire (adapted from the ICAN evaluation; see Dockrell, Sylva, Huxford & Roberts 2008) was administered to the participating EYP staff.

2.6. Procedure

The intervention workshops took place on four consecutive sessions at the University of Oxford. The programme used a combination of role play and class discussion to encourage the EYPs to think about and use a range of strategies known to improve language and emergent literacy in the ECEC setting. These strategies included making puppets of characters for children's books, using the puppets to re-tell the story, looking for environmental print (e.g., text on street signs), and making up new endings for books together with games involving rhyming couplets. Children were individually tested by a trained researcher in a quiet area in the ECEC setting. The tasks were administered in two sessions each lasting 15 minutes.

3. Results

3.1. Descriptives

Data on pre- and post-test measures from the Intervention and Comparison group are shown in Table 2. Standard t-scores were the unit of analysis for the Naming Vocabulary and Verbal Comprehension subtests (BAS). Raw scores were the unit of analysis for the Rhyme and Concepts about Print tasks as these two tasks did not provide standard scores.

The Intervention and Comparison groups did not differ in terms of children's mean age in months at pre-test ($t(68) = 1.481$, $p = .143$) or post-test ($t(68) = 1.879$, $p = .065$). Independent-samples t-tests at pre-test (i.e. baseline) showed that the two groups were matched in performance on each measure of literacy development prior to the Intervention: Naming Vocabulary ($t(67) = .218$, $p = .83$); Verbal Comprehension ($t(66) = -.828$, $p = .41$); Rhyme ($t(66) = -.294$, $p = .77$); and Concepts about Print ($t(67) = .168$, $p = .87$).

Measure	N	Group	Pre-test Mean (sd)	Post-test Mean (sd)
Naming Vocabulary (BAS*)	41	Intervention	48.40 (11.03)	59.68 (10.51)
	29	Comparison	48.97 (10.11)	56.55 (10.31)
Verbal Comprehension (BAS*)	41	Intervention	47.03 (11.19)	48.47 (8.29)
	29	Comparison	44.93 (9.00)	47.45 (7.81)
Rhyme	41	Intervention	4.70 (2.78)	6.62 (2.54)
	29	Comparison	4.50 (2.73)	5.86 (2.79)
Concepts about Print	41	Intervention	7.73 (3.37)	9.40 (3.46)
	29	Comparison	7.86 (3.29)	9.62 (4.09)
Age (in months)	41	Intervention	41.49 (3.88)	47.27 (3.88)
	29	Comparison	42.69 (2.38)	48.79 (2.38)
FTE**	41	Intervention	0.83 (.22)	n/a
	29	Comparison	0.72 (.25)	n/a
EAL/NS***	41	Intervention	17/24	n/a
	29	Comparison	6/23	n/a
Gender (M/F)	41	Intervention	20/21	n/a
	29	Comparison	16/13	n/a

Table 2: Means (and standard deviations) for the different measures of emergent literacy skill and covariates at pre-test and post-test.

*BAS: British Ability Scale (Elliot et al., 1996); **FTE: Full Time Equivalent ***EAL/NS: English as Additional Language/Native Speaker; Full Time Equivalent (FTE): No difference between the control and intervention group ($t(68) = -1.900$, $p = .062$). No effect of Gender: between the control and intervention group ($t(68) = -1.841$, $p = .604$). EAL: No difference between the control and intervention group ($t(68) = -.521$, $p = .070$).

3.2. Effects over Time (pre- and post-test)

Paired-samples t-tests indicated that children in both groups (Intervention and Comparison) improved significantly over time on three out of four measures: Naming Vocabulary ($t_{Comp}(28) = -4.127$, $p = .001$) & ($t_{Int}(39) = -8.313$, $p = .001$); Rhyme ($t_{Comp}(27) = -7.733$, $p = .011$) & ($t_{Int}(39) = -5.287$, $p = .001$); and Concepts about Print ($t_{Comp}(28) = -3.187$, $p = .005$) & ($t_{Int}(39) = -4.473$, $p = .001$).

3.3. The Effectiveness of the Intervention (group differences)

For each outcome an analysis of covariance[1] (ANCOVA) was carried out in which the effect of a number of covariates were controlled prior to evaluating group differences between the

Comparison and Intervention group in outcome measures. The ANCOVA allows us to look at the impact of the PD programme, whilst accounting for other variables measured –e.g. the pre-test score[2] or whether or not a child had EAL. If the Intervention is effective there should be a significant effect of group on the emergent literacy outcome measures. All response variables satisfy the assumptions.[3]

3.4. Naming Vocabulary

The results of the ANCOVA [group (Intervention, Comparison); covariate: pre-test, FTE, Gap between pre and post-test, Gender and EAL] revealed that at Time 2, the Intervention group had higher Naming Vocabulary scores after controlling for pre-test scores and the other covariates at Time 1 where ($F(1, 69) = 5.102$, $p = .027$, $\eta p^2 < .077$). There was also a significant main effect of the covariates 'Pre-test' ($F(1, 69) = 24.651$, $p < .0001$, $\eta p^2 < .288$) and 'English as Additional Language' ($F(1, 69) = 6.295$, $p = .015$, $\eta p^2 < .094$). There was no interaction[4] between group and EAL, ($F(1, 69) = 1.765$, $p = .19$, $\eta p^2 < .028$). Figure 1 illustrates that both groups had similar oral language scores at pre-test but that at post-test the intervention children made more gains than the comparison group children. Figure 2 demonstrates that EAL children did not perform as well on the Naming Vocabulary Measure at post-test as NS children.

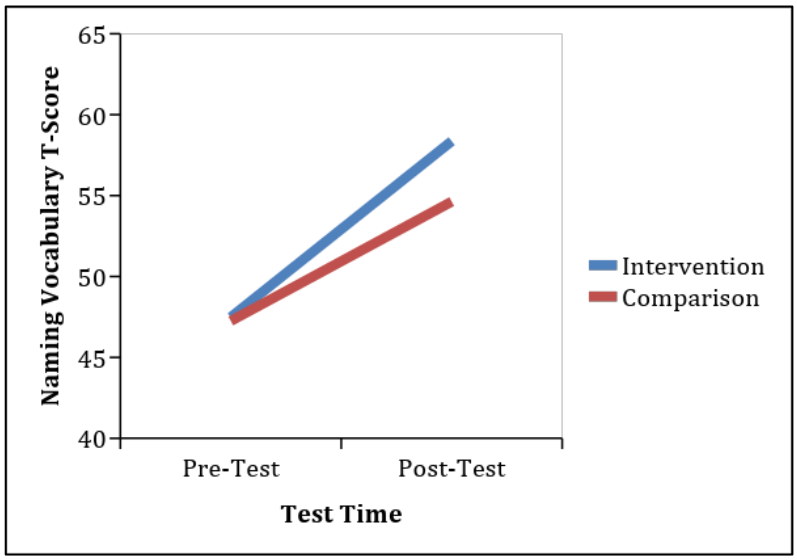

Figure 1: All Children's outcomes at pre- and post-test on naming vocabulary

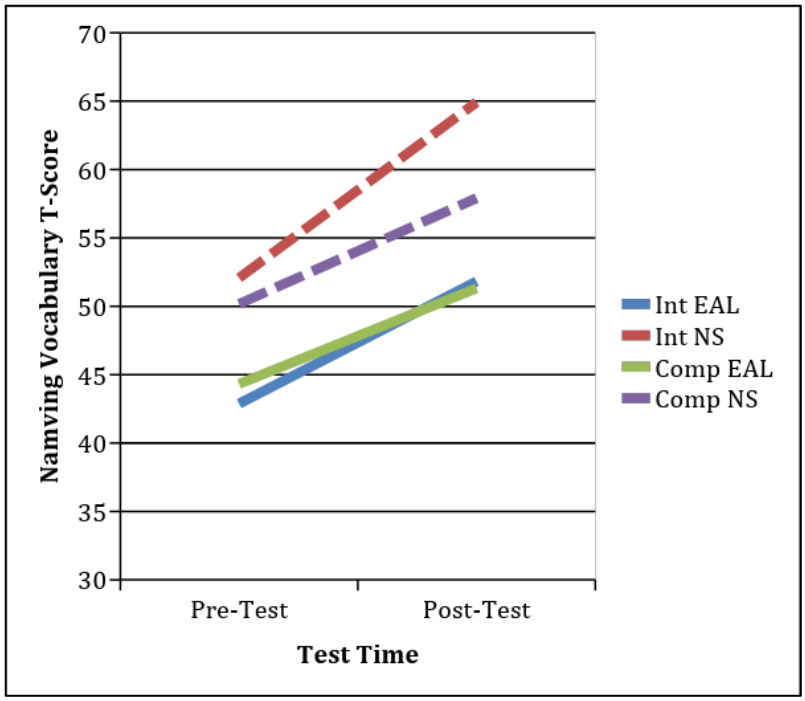

Figure 2: EAL children and NS children's outcomes at pre- and post-test, broken down by language status on Naming Vocabulary

3.5 Verbal Comprehension, Rhyme, and Concepts about Print

The ANCOVA revealed that there were no significant main effects or interactions on the Verbal Comprehension, Rhyme or Concepts about Print measures.

3.6. Effect Size

Effect sizes (Cohen's d) were calculated for the Intervention by computing the difference in progress between groups at post-test (adjusted for covariates) divided by the pooled post-test standard deviation for each measure. An effect size of d=.25 or more is considered an educationally meaningful difference. As expected, the effect size for Naming Vocabulary using Cohen's d was educationally meaningful for the intervention group compared to the comparison group at .30. Surprisingly, the effect size for Rhyme (d=.29) was also educationally meaningful in favour of the intervention group despite the fact there were no significant differences on this measure, whereas the Verbal comprehension (d=.13) and Concepts about Print (d=.06) measures were not.

3.7. Practitioner questionnaire (Dockrell et al. 2008)

Sixteen pre-test questionnaires and 14 post-test questionnaires[5] were returned. The response rate was low and consequently we only qualitatively discuss the general direction in which

practitioners' responses were developing or changing. At post-test, practitioners reported spending more time on language and literacy activities and on activities focussed on the phonological dimensions of language. Activities that changed from 'twice a week' (pre-test) towards on a 'daily basis' (at post-test) were: talking in small groups; building new vocabulary, children involved in drama activities, having language activities in small groups; finding letters in words; separating words into sounds. Furthermore, activities related to reading or looking at books or other texts took place daily for at least 15 minutes whilst practitioners reported that this happened often only twice a week at pre-test. Practitioners also reported feeling more knowledgeable about current practice in their settings in relation to activities to monitor progress for children with English as an Additional language (EAL).

4. Discussion

In general, the results of this small-scale study showed that only four sessions of PD for early years practitioners can have a manifest benefit on children's naming vocabulary, though the intervention was not effective on our other dependent measures (rhyme, concepts about print, and verbal comprehension). However, importantly for the context of this paper on multilingual pupils, there was no effect of the PD on naming vocabulary scores of children with EAL. Indeed, as has been reported in previous studies identifying a lag between children with EAL and non-EAL in the early years, the EAL pupils in our study scored almost half a standard deviation below the average score on naming vocabulary. This finding is consistent with previous work identifying that when children with EAL come to school-based settings, they often have smaller vocabularies (in English) than their peers. What is less clear, however, is why the intervention did not have the desired effect on EAL pupils' vocabulary.

Unlike our 'Ready to Read' PD intervention study, the 'Talking Time' intervention (Dockrell et al. 2010) and the intervention in Fricke and Millard (2016) were focused on working directly with children, hence perhaps, as indicated earlier in this manuscript, finding a direct effect on children's outcomes is more challenging when the intervention is directed at the practitioner level, and not the pupil themselves. For example, The Talking Time intervention itself was longer than our PD intervention where children received 7.5 hours of intervention in 'Talking Time' but EYPs received only four hours of intervention in the 'Ready to Read' study. Another possible explanation for why our intervention didn't work for EAL but 'Talking Time' did could be sample size – where we only had 17 pupils with EAL in the intervention compared to

the 41 pupils with EAL in the 'Talking Time' intervention. The good news is that the 'Talking Time' intervention shows that an intervention targeted at EAL pupils on oral language can have a positive impact. The Ready to Read intervention shows focusing on PD can also have a positive impact on naming vocabulary, but that for this to have a manifest benefit to EAL pupils perhaps the intervention needs to be longer, and possibly also include focused work with the pupils themselves (and not just the EYPs).

As discussed in section 1 of this paper, Dockrell et al. (2010) and Fricke and Millard (2016) suggest that key targeted vocabulary can be learned as a function of providing young children with EAL with structured opportunities to i) encounter new words; ii) experience how these words are used across different contexts such as stories and in discourse surrounding stories and iii) opportunities to use and practice (repeatedly) these novel vocabulary items. Taken together the three intervention studies described in this paper demonstrate that intervention aimed at improving oral language can have a manifest benefit on key vocabulary in young pupils. The Dockrell et al. (2010) and Fricke and Millard (2016) study particularly demonstrate that working directly with the children themselves and not the EYPs specifically can result in bigger changes at post-test. However, ultimately it is the teacher who will work with the pupil, not a researcher in an intervention study. We need, therefore, to examine PD resources more carefully to identify what is likely to be effective. Our 'Ready to Read' study suggested that a PD aimed at the EYP level probably needs more time (than four hours) and possibly higher vocabulary in the children with EAL in order for practitioner-level intervention to have a statistically significant impact on post test scores. At the same time, our 'Ready to Read' study also demonstrated that only four hours of quality PD can have a manifest impact on children's naming vocabulary. These findings underscore the importance of evidence-based educational and training experiences for EYPs.

There have been a number of reports in the media recently concerning the 'vocabulary gap' in school-aged pupils (e.g., Oxford Language Report 2018).[6] We know from decades of research how important oral language (of which vocabulary is a key component) is for children's language and literacy development, and this is equally relevant for EAL and non-EAL children. Furthermore we know from recent interventions aimed at young children with language problems that interventions can be effective (Fricke, Burgoyne, Bowyer-Crane, Kyriacou, Zosimidou, Maxwell, Lervåg, Snowling & Hulme 2017). There is much, however that we still

do not yet know. For example, a recent meta-analysis has indicated that vocabulary instruction, while helping children to learn individual words, does not seem to have a big impact on generalized comprehension skills (Wright & Cervetti 2016). Furthermore, given the high (and increasing) proportions of children with other languages in schools, we also need to better understand the inter-relationships between vocabulary instruction, vocabulary learning, and the development of literacy in both EAL and non-EAL pupils. Until we have truly understood these relationships we are less effective educators.

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1Children in this study were not randomly assigned to groups. The advantage of non-randomising children is that it deals with intact groups and thus does not disrupt the existing research settings (Dimitrov & Rumrill 2003). Of course, the disadvantage is that there could be a feature of the group not included in the study (i.e., a confound) that might have an unintended effect on the outcome.

2With nonrandomised designs, the main purpose of ANCOVA is to adjust the post-test means for differences among groups on the pre-test, because such differences are likely to occur with intact groups.

3There are five assumptions that underlie the use of ANCOVA and affect interpretation of the results: Normality of residuals, Homogeneity of Variances, Homogeneity of regression slopes, and Linearity of regression and Independence of error terms.

4NB. Interaction effects are notoriously hard to detect with smaller sample sizes (Tabachnick & Fidell 2013). The intervention had effect for EAL and NS combined.

5 Two practitioners were not working at the Intervention nurseries anymore at post-test.

6 Why closing the word gap matters: Oxford Language Report. (2018) Oxford University Press. https://global.oup.com/education/content/dictionaries/key-issues/word-gap/?region=uk