

Title: Language Made Fun

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Abstract

Acquisition of English language skills is vital for the successful integration of children into Education and for educational attainment. Newcomer children who are not proficient in the language of instruction, may be left vulnerable to exclusion in the classroom and long-term educational failure (McEachron 1998, Paradis 2005). Targeted linguistic support can increase access to education by prioritizing the development of core linguistic skills such as vocabulary and grammar. 'Language Made Fun', is a joint Ulster University-Barnardos' initiative that was developed to investigate English vocabulary and grammar development in a group of newcomer children from various language backgrounds. To address the needs of these children, we developed an individually tailored language intervention programme to facilitate English language development as part of a wider Barnardo's family support programme for newcomer pupils and their families. Trained undergraduate student volunteers from both Linguistics and Speech and Language Therapy delivered the interventions for the children. We used formal and informal assessment tools to measure language progress. Main positive outcomes included improvements in receptive vocabulary, morphology, receptive and expressive syntax including an increase in sentence length and complexity. These findings indicate the potential value of an intervention programme such as 'Language made fun', which could be implemented more widely in educational contexts to help support newcomer pupils and their families and teachers.

1. Introduction

Changing demographics in Northern Ireland in recent times such as the introduction of EU (A12) Accession Legislation (2004, 2007, 2008), and the refugee crisis in countries like Eritrea, Somalia and Syria, have led to an increased number of children from culturally and linguistically diverse populations. This is reflected in the increased number of bilingual or multilingual children in our schools (Grech and Dodd 2007). In Northern Ireland, the 1990s peace process has resulted in a more dramatic increase in the number of newcomers arriving into the country. According to the 2011 census, the proportion of the usually resident population born outside Northern Ireland rose from 9% (151,000) in 2001 to 11% (202,000) in 2011. In particular, 2% of the population (i.e. 35,700 people) originate in A12 countries (Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia), compared to just 0.1% in 2001. In 2001, English was not the main language for 3.1 per cent (54,500) of Northern Ireland residents aged 3 years and over. The most prevalent languages after English (in order of speaker numbers) in 2011 were Polish (1%), Lithuanian (0.4%), Irish (0.2%) and Portuguese, Slovak, Chinese, Tagalog/Filipino, Latvian, Russian, Malayalam and Hungarian (all 0.1%).

This population shift is reflected clearly across society, and particularly when observing the linguistic profiles of Northern Irish classrooms. Northern Ireland schools have moved on from a situation where pupils were predominantly monolingual English speakers, and indeed for the most part speakers of the same local dialect. In the current situation, classrooms and communities have diversified to include children who have grown up bilingual, others whose

first experience of English is starting primary school, and those who enter the English school system at post-primary level. A newcomer (formerly EAL, English as an Additional Language) pupil refers to 'a child or young person who has enrolled in a school but who does not have satisfactory language skills to participate fully in the school curriculum and does not have a language in common with the teacher' (DENI 2009). The Department of Education Northern Ireland (DENI) 'Supporting Newcomer Pupils' summary document reports that in October 2008 schools in NI had as many as 6,995 newcomer pupils, which is three times the number in 2004. While the increased cultural and linguistic diversity of NI classrooms has many positive implications, it also presents a challenge for both teachers and for newcomer pupils themselves in terms of both social integration and curriculum engagement. Each year DENI allocates funds to schools via the Common Funding Formula for each newcomer pupil recorded on the school census. These funds are to help the school 'build upon and maintain the expertise of their teaching staff and provide specific support to those Newcomer pupils who have been identified in the census by schools as needing support' (DENI 2009). Appropriate allocation of this funding is crucial in terms of provision of adequate support for newcomer pupils. The findings of this research can inform policy on funding levels and distribution by highlighting the value of a small investment into targeted English language support for newcomer pupils.

Bilingual children from immigrant or refugee backgrounds (newcomer pupils) typically speak a minority language (L1) and often are first exposed to the societal language (L2) at a later stage, usually pre-school or primary school (for example, see Hoff 2017). Research has indicated that these children, typically sequential bilinguals with often no English spoken in the home, are at risk of underachievement if not sufficiently supported with their second language (e.g., Genesee et al., 2005, Paradis 2008, McKendry & Murphy 2011, among others). For example, Cobo-Lewis, Pearson, Eilers, and Umbel (2002) investigated both Spanish and English development in bilingual school-aged children by examining receptive and productive vocabulary size in monolinguals and bilinguals. The main findings indicated that, while monolingual and bilingual children showed comparable performance on basic reading tasks, the bilinguals achieved lower scores on vocabulary measures. Under-performance at the vocabulary level can have knock on effects which can be detrimental on various levels. For example, without a sufficient grasp of L2 vocabulary, bilingual children can be at risk of not developing age-appropriate oral proficiency in the L2, and appropriate literacy skills, both of which are crucial for educational success overall (August et al. 2005). A systematic review of 29 English language/literacy intervention studies in the USA, Canada and UK (Murphy 2014), revealed that newcomer children who struggle with word reading can benefit most from interventions that focus on word-level skills.

Play-based interventions are practices typically designed to develop language through guided interactive play and are commonly used with pre-school children with language delay or disorders (see for example, Yoder et al. 1995). Child-centred approaches such as 'Mileu teaching' involve manipulating the natural play environment to create opportunities for children to engage in the target (linguistic) behaviours and using specific techniques to encourage these behaviours. The value of play in language learning in typically developing children is also recognised in the literature (Harris et al. 2011, Kagan & Lowenstein 2004, O'Bleness 2015). Play is an ideal context for language learning because children are engaged in a meaningful and enjoyable activity (O'Bleness 2015) and by delivering interventions in this way, we can expect higher levels of engagement with the language material within.

2. Aims of the project

The main aim of the research project was to investigate the value of targeted linguistic assessment to inform the development of a tailored English language programme to support English language development of L2 English sequential bilinguals. A second aim was to support and encourage the families involved in maintaining the child's linguistic and cultural identity. In doing this we anticipated making a contribution to current debate and aimed to inform policy on language provision for EAL children in Northern Ireland.

3. Methodology

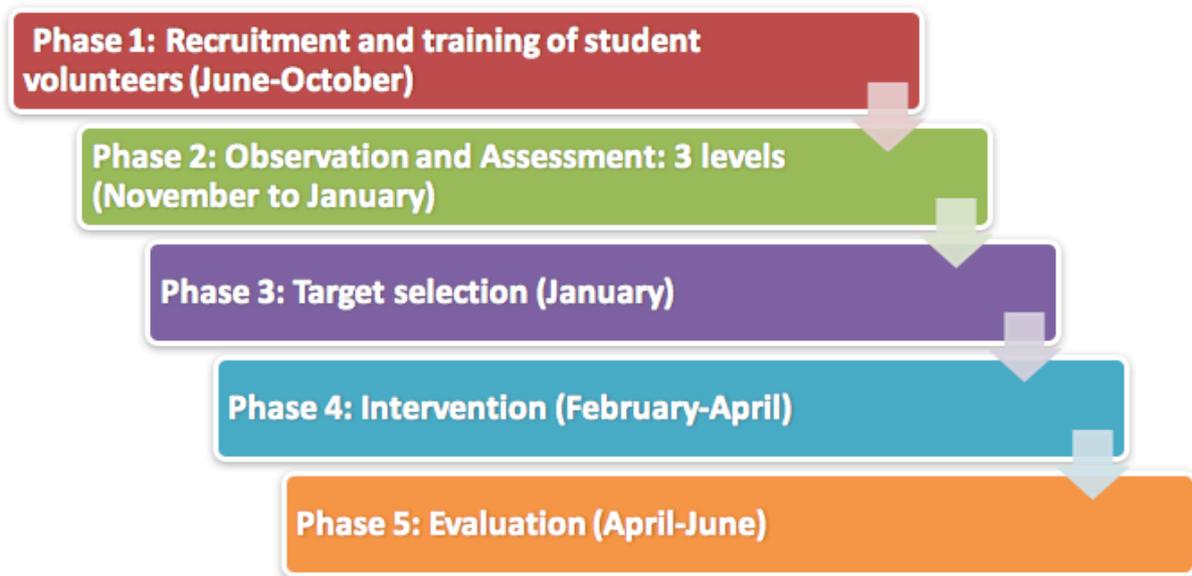
The nature of the project and the related support programme required us to work with a project partner for overall delivery of the project. Barnardo's is a dynamic and innovative children's charity whose aim is to help children and young people achieve the best for themselves and their families. In particular, we worked closely with Barnardo's *Tuar Ceatha* service which provides a range of family support services to immigrant families in the greater Belfast area under the themes of empowerment, poverty and education. *Tuar Ceatha* has worked with families from over 35 different countries including over 200 migrant children whose parents had no or very limited English language skills. The project was funded by the Garfield Weston Trust and The Big Lottery Fund (as part of the Family Learning and Integration Hub project).

Student volunteers were recruited from undergraduate programmes in Linguistics and Speech and Language therapy. The students received training by a team of staff at Ulster, an EAL teacher and also received Barnardo's volunteer training. The programme was delivered by trained Ulster university student volunteers.

Although this research is ongoing, in each academic year a new set of pupils are selected for participation in each cycle. The project was piloted in the 2013-2014 school year. The cohort for the pilot study had three children who were native speakers of Arabic and initial findings indicated improvements in both vocabulary and grammar as well as improvements in communication skills and confidence. The project is set to run until 2020 and is currently in its fourth year. The most recent cohort of children (school year 2017-2018) has 9 children and includes speakers of Hungarian, Polish, Arabic, Romanian and Persian.

Each cohort of pupils participates in the study over a twelve-month period which consists of five phases as is detailed in figure 1 below.

Figure 1: Programme overview (12 months)



Phase 1: Recruitment and training of student volunteers

Student volunteers were recruited from our undergraduate programmes in Linguistics and Speech and Language therapy. Selection was based on academic achievement, interview and satisfactory Access NI clearance. The students received training by Barnardos' and become accredited Barnardo's volunteers. The students were also trained by a multi-disciplinary team (Speech and Language Therapy staff from the School of Health Sciences at Ulster, linguistics staff from the School of Communication at Ulster and an externally appointed EAL teacher) to equip them to successfully collect data and deliver the interventions at phase 4. The students also benefitted from support at bi-weekly group supervision sessions where feedback was gathered on progress of the project.

Phase 2: Observation and Assessment

The children's language skills were measured at the beginning of the programme using both informal and formal assessment on a one to one basis. First, informal sessions allowed students to establish a rapport with the children through non-targeted play-based language and communication activities such as memory games, role play and story book reading. This also allowed students to develop appropriate intervention activities that were tailored to the child's age and interests. During this stage students video-recorded and subsequently transcribed their sessions. Data was analysed under supervision of linguistics staff.

Interviews were conducted with the class teachers to help the team form a holistic profile of each child's strengths and needs. Teachers also completed a *newcomer pupil questionnaire* which was developed following Chlapana (2012) to gauge choice of language use in school, in the home and in social situations. During this second phase, the formal component of the assessment involved administering two standardised assessments: *The Clinical Evaluation of Language Fundamentals* (CELF-4), which is a standardised language assessment that covers a range of language areas in both comprehension/reception and production/expression. Four

subtests were selected based on observations of the children; 2 receptive language subtests (namely (i) basic concepts which tests comprehension of basic concepts, (ii) sentence structure which assesses comprehension of a range of syntactic constructions) and 2 expressive language subtests (namely (i) expressive vocabulary which assesses ability to use certain high to low frequency vocabulary items, (ii) word structure which assesses ability to use morphological markings e.g. verb tense, agreement etc.). The second language assessment used was the *British Picture Vocabulary Scale* (BPVS-2) which tests comprehension of vocabulary. As performance on the BPVS does not rely on reading or verbal responses, this assessment may be administered to pupils with limited English language ability.¹

Throughout the observation and assessment period, the students also kept reflective logs of their sessions with the children. This period was crucial in allowing the team to form a detailed communicative and linguistic profile of the children, indicating both actual and perceived strengths and weaknesses across different communication settings (for example, home, school).

Phase 3: Target Selection and intervention development

The third phase was dedicated to selection of language errors that were identified as targets based on the results of the observation and assessment phase. In this phase, the recorded data was analysed in terms of morphosyntax and particularly noting language specific errors. Selection of grammatical targets was based on consideration of several criteria; consistency, (more consistent errors that reflect developing skills are selected over inconsistent errors), language specificity (those errors in L2 English that could be attributed to language transfer from L1 that can particularly benefit from intervention) and ease of target (those errors that could be targeted in play-based activities). Targets varied between language cohorts and between pupils and were chosen on an individual basis. Common targets selected previously included pronoun case error (1), tense error/omission (2), auxillary and copular verb omission (3), subject-verb agreement error (4) and number agreement error (5):

- | | |
|--|-----------------|
| (1) That's she | (Arabic) |
| (2) I am in China I got it | (Mandarin) |
| (3) But we still learning English in there | (Romanian) |
| (4) He want a girl | (Syrian Arabic) |
| (5) I don't like princess | (Mandarin) |

Phase 4: Intervention

Following collection of informal and formal assessment data, the team along with the students developed individual targeted interventions for each child. The general intervention approach was play-based and involved a range of techniques including child-centered methods using principles of Mileu Teaching (e.g. Yoder et al. 1995) and grammar-facilitation methods that are typically employed by speech and language therapists in targeting grammatical

¹ It is important to note that formal language assessments were used as within-child descriptive outcome measures. We did not use the scores or interpret against monolingual norms.

impairments in children (see Ebbels 2013 for a review). Materials included age-appropriate toys, games and paper-based resources sourced from common ESL websites. Interventions were administered as part of an interactive play session and were flexible in terms of the delivery techniques depending on the individual child. Each selected target and the accompanying activities were designed to be fun and motivating for the children and used a combination of toys/games and paper-based specific ESL resources. The intervention phase lasted for six weeks and involved weekly sessions of 1 hour. During this phase the practice of completing a reflective log was maintained after each session to record which intervention methods worked best with the child and monitor any observable progress.

Phase 5: Evaluation

At the beginning of the evaluation phase, the standardised language tests were re-administered and scores were compared to the pre-intervention scores for each of the children. We did not compare scores across children as the cohorts involved children from a range of language backgrounds. We also collected informal language samples from the pre-intervention sessions to allow detailed analysis of the children’s spontaneous language and communication skills.

4. Main findings

For the current discussion we focus on one cohort of children who participated in the 2015-2016 academic year. This cohort included 5 children (see Figure 1) with an age range 5;04-7;10 (Mean=6;04). All of the children were L2 English speakers and were selected based on their linguistic needs as reported by their class teacher. All children had between 6-12 months exposure to English. None of the children had indicators for language difficulties in their native language at the point of entry to the programme.²

Figure 2: Participant information (2015-2016)

Participant ID	L1	Age at entry to programme
P1	Spanish	7;0
P2	Spanish	6;0
P3	Mandarin Chinese	5;7
P4	Mandarin Chinese	5;4
P5	Polish	7;10

In terms of grammar, we identified a number of main errors from the 2015-2016 cohort of pupils, a sample of which are shown below:

Figure 3: Pre-intervention data samples

² Note that within this cohort, there was one child (participant 5) who remained non-verbal throughout the whole programme. As a result, we had no data upon which to formulate targeted grammar intervention. This child's intervention consisted of introduction to new vocabulary through reading of books and playing games. The child interacted with the volunteer by pointing.

Error type	Example	Participant
Tense agreement	<i>when I am a little girl I scribble</i>	Participant 4
Subject-verb agreement	<i>A cow say moo</i>	Participant 3
Auxiliary and copular omission	<i>this baby so cute</i>	Participant 4

All of the children exhibited expressive grammatical errors pre-intervention. The children engaged well in the play-based language activities which were specifically tailored to their personal interest and learning style. Speech samples taken at the post-intervention stage indicate a reduction in the number of grammatical errors in the three areas previously noted.

Figure 4: Post-intervention data samples

Error type	Example	Participant
Tense agreement	<i>I got three friends Monica and Lucia and Zara</i>	Participant 4
Subject-verb agreement	<i>They want to eat it, they're going woof woof</i>	Participant 3
Auxiliary and copular omission	<i>I tell Miss Emma, she's my, she's my teacher</i>	Participant 4

Figure 5: BPVS pre-intervention and post-intervention scores (2015-2016)

	Pre-intervention			Post-intervention		
	BPVS			BPVS		
	Raw score	standard score	age equivalent	Raw score	standard score	age equivalent
Participant 1	51	84	5; 0	51	84	5;0
Participant 2	45	86	4;04	67	105	6;07
Participant 3	79	122	7;09	80	123	7;10
Participant 4	62	108	6;01			
Participant 5	52	78	5;01	63	86	6;02

Figure 6: CELF pre-intervention and post-intervention scores (2015-2016)

	Pre-intervention				Post-intervention			
	CELF(subtest scores)				CELF(subtest scores)			
	C&FD	WS	SS	FS	C&FD	WS	SS	FS
Participant 1	12	15	18	nc	12	23	23	nc
Participant 2	11	6	20	12	11	12	18	12
Participant 3	15	10	21	19	16	19	23	32
Participant 4	8	7	13	28	11	16	13	nc
Participant 5	14	nc	19	nc	17	nc	23	nc

As shown in figure 6, there were a number of subtests of the CELF that were not completed in the pre or post measures or both. This was due to children not being available or not complying with the assessment. Note that while we have quoted the age equivalent for the BPVS, this is for descriptive purposes only.

We can see in figure 5, that one child made no post-intervention improvements in receptive vocabulary as measured by the BPVS. One child did not complete the post intervention assessment (participant 4) and 3 of the children showed improvements on this measure of between 1-22 points (on the raw score). Turning to the results of the CELF as shown in figure 6, there was a positive numerical trend in the raw scores of the children on most subtests. One participant (participant 3) showed a decreased score on the formulating sentences subtest post

intervention. It is unclear how to explain this finding however it may have been due to child compliance or reluctance to complete the task. Of note, this participant showed improvements on all other subtests of the CELF but showed minimal change on the BPVS measure of receptive vocabulary.

We also noted a reduction in errors in other areas not directly targeted, such as tense marking and question formation and an increase in complexity and sentence length post-intervention.

Teacher reports

In addition, the children showed improvements in their confidence in communicating in English as reported by their class teachers. Follow up interviews conducted with teachers reported increased confidence in the classroom.

Parental reports

Parents reported positive outcomes for the pupils, some of which are listed below:

“She really enjoys it. She is always looking forward to it”

“She learned without realizing.”

“Her English has improved, she has learnt new words.”

“She really likes it and really likes Beth.”

Student reports

In addition, the students reported the positive impact of the intervention including enjoyment, increase in vocabulary and improvement in English overall.

I had a new book to read with him which had big text and lots of pictures, I felt that he appreciated this book and followed and listened well. We played a bingo game that I made up myself involving different types of clothes and I asked him to describe each item, he did this very well. I felt like this was a real improvement and that the last couple of weeks had been beneficial.

(Extract from observation log, Participant 1)

Challenges

We encountered some challenges in carrying out the standardised assessments within the allotted time frame, mostly due to the length of time it took for assessment, but we were also affected by some unexpected absences of the children. Administration of the standardised assessments was very time consuming and some of the subtests were not completed as a result. Incomplete test scores made it difficult to measure change and the effect of the interventions.

5. Discussion and conclusions

Our research has shown the value of detailed linguistic analysis of recordings of the children speaking English during play-based activities which provided a detailed profile of the children's linguistic strengths and weaknesses. The subtle errors caused by language transfer were easily identified by the students under the supervision of the team. The identification of such problems arising directly from grammatical transfer requires linguistic expertise and such errors may not be explicitly observable to a class teacher, and therefore would not otherwise

be targeted. Crucially, the project team found that the standardised language tests were not sensitive to the subtle grammatical errors of these children and hence targets were identified based on the linguistic analysis of the spontaneous speech samples that were recorded and transcribed on a weekly basis, and not those based on the results of the standardised language tests. As is discussed extensively in the clinical literature on the speech and language assessment of bilingual children (for example, see De Lamo White and Yin 2011), standardised language assessments are crucial but they should not be used as the only measurement of change in bilingual children. Detailed linguistic analysis provided a clear profile of the grammatical errors of the children. These errors may not be readily observable or described by teachers or those without linguistic training. This emphasizes the value of sophisticated linguistic analysis as well as the background knowledge in the native language of sequential bilinguals, in addition to standardised testing.

The results of 'Language made fun' provide evidence to support the need for specialist linguistic support for teachers working with newcomer pupils. We have shown that individuals with expertise in linguistics and detailed language analysis can provide this support by providing expert advice on grammar, language acquisition and language transfer.

In terms of policy, funding for newcomer pupils is important and should be ring-fenced accordingly to support pupils and specialist training for teachers and classroom assistants. A programme of support such as 'Language made fun' represents a cost-effective option for the use of DENI Newcomer pupil funds to provide the necessary support to teachers whilst improving language outcomes for newcomer pupils. Our research has also shown that standardised assessments that have been designed for use by Speech and Language therapists are not sensitive enough to detect the subtle errors in the language of these children and that in-depth linguistic analysis of these individuals' speech is crucial in detecting errors, particularly those that arise as a result of cross-linguistic transfer. Finally, this work with multilingual populations has revealed a lack of appropriate multilingual assessment measures available to professionals who are now increasingly dealing with non-native English speakers in the classroom.

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