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Bringing the words out of the Montessori box: Towards a Montessori system for enhancing language development from birth to six years

Summary

Anecdotal evidence from early years practitioners in the UK reflects a perception of gradual, but persistent, decline in the extent of native English-speaking children's vocabulary and oral communication skills when they start nursery aged 2–3 years. This paper will examine the scope and reasons for the perceived decline as background, before surveying and evaluating national programmes implemented in the UK to remedy it. Then, building on how the Montessori approach supports and enhances children's language development during the early years, a proposal for a Montessori-based remedial system to develop and extend the range of individual children's vocabulary, grammatical forms, and syntactic structures, in the order in which native speakers of English acquire them, will be outlined.

Keywords: early speech enhancement scheme, Montessori approach, language development, early education

Słowa kluczowe: program wczesnego wsparcia rozwoju mowy, podejście Montessori, rozwój językowy, wczesna edukacja

Introduction

Evidence from early years practitioners in the UK reflects a gradual, but persistent, decline in the extent of native English-speaking children's vocabulary and oral communication skills when they start nursery aged 2–3 years. This paper examines the scope and reasons for the perceived decline as background, before briefly surveying programmes implemented in the UK to mitigate it. Then, building on how the Montessori approach supports and enhances children's language development during the early years, a proposal for a Montessori-based enhancement scheme to develop and extend the range of individual children's vocabulary, pronunciation, grammatical forms, and syntactic structures, in the order native speakers of English acquire them, is outlined. Since philology underpinned Montessori's own presentation of language, and because Montessori practitioners continue to be trained in this discipline rather than linguistics, a philological approach to language acquisition has been adopted for this project.

Robust early language foundations are essential for, and predictors of, children's subsequent effective learning and education, Finnegan et al. (2015), but this study concentrates on just one of these key foundations. While recognizing social context, eye contact, body language, and gesture are crucial for effective communication, the focus here is specifically on children's "productive", or "expressive" language, their speech, rather than on communication more generally. Note should be taken of the point made by O'Grady and Cho (2011) that acquiring a grammar is essential for developing linguistic skills.

Parameters of the study

The objective is to devise a scheme to help Montessori-trained practitioners working in Montessori settings in the UK to support the speech development of individual children with observable speech delay from the time they enter their setting. The work is based on Montessori's theories about children's language acquisition, many of which are now confirmed by neuro-scientific research, and on subsequent, more recent research into first language acquisition. The parameters of the study are lexical, phonetic, grammatical, and syntactic, and organized to follow Montessori's (2007) timeline for language development.

Language acquisition is a large field of investigation, but relatively few researchers have attempted to develop a systematic approach to studying individual differences among early years children (Bates et al. 1988). An individualized, holistic approach based on observation and on meeting every child at the point of development he or she has reached is a key Montessori principle (Mavrič 2020). This means that the proposed scheme needs to be individualized to meet the developmental stage and the unique interests of each child with whom it might be used.

Initially, as an active research project, the focus is on children whose first home language is English. This is not to say that activities planned and implemented will not be of benefit to children for whom English is a second or additional language, nor that these should not be offered to them, but in terms of evaluating the effectiveness of the project, limiting the scope in this way will reduce the number of variables affecting the overall picture.

The early years situation in the UK

In the UK, limited devolution to the four "nations," England, Scotland, Northern Ireland, and Wales, has resulted in a fractured and complex early years landscape. However, children generally enter early years settings between the ages of 2 and 3, supported by some level of government funding disbursed to settings by local authorities. Legally they can remain in their early years setting, with funding, until they are of compulsory school age, the start of the term after their fifth birthday. In practice however parents are pressured by mainstream schools to have their children start in the reception class if they have turned 4 by the beginning

of the academic year (1 September). This means that some children may only be in nursery education for one year before starting formal schooling.

The term "setting" covers (state-) maintained nursery schools, child-minders working from domestic premises, day nurseries, pre-school playgroups, Montessori children's houses and infant communities, home-educating co-operatives, and nursery schools. Providers receiving funding for children must follow a prescribed early years curriculum, in England the Early Years Foundation Stage (EYFS) (Department of Education 2023) and in Scotland the Curriculum for Excellence (CfE) (Education Scotland 2019). Montessori practitioners find it advantageous to be able to articulate clearly the correspondences between the Montessori early years curriculum and the national curriculum in force where they are working.

Clinically diagnosed language and communication delay

What is proposed is not a replacement for clinical diagnosis of significant developmental delay, which must be referred to relevant professionals and speech and language services. Often, though, these services are stretched, with long waiting lists for appointments and constraints on the support they can offer. So, given the knowledge and understanding of language development that fully trained Montessori practitioners bring to their work with the children, and their routine observations of all aspects of the children's development, they are well placed to plan and implement activities geared specifically to match an individual child's observed level of language development, and to support progression, rather than just waiting for intervention from dedicated professionals. In supporting children's language development, time is of the essence (Hart, Risley 1995).

The perceived decline in children's language development in the UK

A short questionnaire sent to a limited sample of Montessori practitioners with around 25 years' experience in the field largely confirmed anecdotal evidence that the language skills of children starting in their settings at around age 2 are lower now than in previous years (Prochazka 2024).

The quality and extent of children's language acquisition and the potential effects of language delay on their subsequent learning and prospects for educational attainment had already been the subject of debate before the pandemic (Scottish Government 2019), but documentation of the effects of COVID lockdown restrictions on the cohort of early years children who entered formal school as the pandemic ended, having missed out on nursery education, has intensified concerns about language delay (Weinstein 2021).

There are two caveats to bear in mind when considering possible reasons for the identified decline in language acquisition and communication skills. The first is that although socio-economic factors, such as household income and level of educational attainment, and

situations, such as family break-up, substance abuse, or domestic violence, all have significant implications for children's holistic development (Law et al. 2017), they are beyond the scope of this study, which limits itself to consideration of factors and situations which are deemed specifically to impact the development of children's speech in the early years.

The second caveat, when looking back over 25 years or so, is that the baseline for more recent research may itself reflect the decline it is seeking to characterize. This, or possibly the relative affluence of the demographic of some Montessori settings, may have resulted in higher than expected assessments of current language skills in some of the responses to the author's questionnaire.

Earlier warnings

A quarter of a century ago warnings were already being sounded about the effects of digital technology on children's acquisition and use of language.

Too much screen time

Healy (1998) was an early exponent of the potentially detrimental effects on small children of too much screen time, noting that solitary computer use limits a child's verbalization and stressing that children do not develop their spoken language as effectively from watching it spoken on screen as in face-to-face conversation with a real person. Then the concern was TV and computer screens; now phones, tablets, and other mobile devices are a part of many children's normal, everyday life.

Shortened attention

Consequent upon more time spent in front of the TV or computer screen, compounded by the nature of what is being viewed - quickly changing, brightly coloured images set in noisy soundscapes of impactful music, shouting, strident on-screen interjections, bangs, crashes, and thuds – children's attention spans have noticeably shortened. A contemporary contributing factor is parents having recourse to phones and tablets as passive entertainment to keep them quiet and occupied. Use of mobile media devices has been shown to be associated with expressive language delay in 18-month-old children (van den Heuvel et al. 2019).

Background noise

The aural environment of many modern children is full of background "white noise" surround-sound, competing with or drowning out the human talk they need to hear to perfect their own speech. Time spent with the TV on is associated with lower language levels at 24 months (Roulstone et al. 2010). That today's adult social gatherings seem to

have become much louder and less inhibited than a quarter of a century ago may also be a contributory factor.

Lack of sleep

The effect of the blue light from screens viewed before going to sleep for the night on a person's circadian rhythms is known, but research by Cheung et al. (2017) into the impact of touchscreen use by small children has correlated additional hours of touchscreen use to measurable loss of sleep.

The impact of the COVID pandemic

Language deprivation

The two total lockdowns in the UK had a major impact on the language development of preschool children because of the social distancing they experienced, just as they were entering their sensitive period for social development (Phillips 2022). By being physically prevented from having social contact with extended family members, the children were deprived of exposure to the richness of different accents, dialects, intonations, and language registers.

During lockdown children were also deprived of total immersion in a wider societal soundscape, such as that experienced, for example, when going to the supermarket, on the bus, or to the hairdresser. In the normal course of child upbringing in western society, such opportunities for small children to be immersed in the adult "speechscape" of their time and place are becoming ever more rare, but Montessori (2012) was convinced of the benefits of the parent taking the baby everywhere.

Also important to remember is that during lockdown children were unable to mix with children other than their own siblings, so losing out on all the peer-to-peer language practice and learning that takes place in any group of children, regardless of their ages and stages of development.

Effects on the children's immediate environment

The lockdowns affected children's learning environments in two significant ways. The first was to cause a shrinkage, rather than a gradual expansion of the opportunities for physical and sensorial exploration of all aspects of their immediate locality, beyond their home and garden. This meant that the motivations to talk about what they were seeing and experiencing, to build their vocabulary and develop their ability to communicate new thoughts and ideas were weaker than they would have been if they were interacting normally in an ever-extending environment (Routley 2017).

The second effect presents as a dichotomy. For some children, being at home with their parents 24/7 was an enriching experience both for them, and for their parents too. But for other families it proved a very challenging situation, where parents were working from home, without the time, or possibly the knowledge of how important it is (Hart, Risley 1995) to talk as much as possible directly to their children.

Modern changes affecting children's language development

Changes in parenting styles

In addition to the factors identified above, consideration needs to be given to how parenting generally has changed over the last quarter of a century and how this too affects the development of children's speech and their ability to communicate.

In ways that could not have been conceived of 25 years ago, external, digital forces are at play in UK parenting. Parents are influenced by, and measure their skills against, the parenting styles adopted by celebrity and popular culture and disseminated on social media and influencers' websites, rather than against modelled behaviour of earlier generations.

One manifestation of this is the idealization of childhood as being completely child--centred, making many parents reluctant to say "no" or deny children what they want. This makes boundaries unclear and inconsistent, often putting the child, rather than the parents, in charge. There are several consequences to a child's upbringing being determined by his or her wants rather than needs. One is that parents may strive to keep children constantly entertained, with a full timetable of activities leaving them little or no down-time to process what they have learned during the day. Unstructured time spent alone is important for a child to become independent, to learn to concentrate and to begin to self-regulate (Healy1998). A full social calendar also means that a child may lack freedom independently to discover how to make and be friends.

If small children learn to expect that they can do anything they like, situations will often arise where they are left until they overstep the mark before their behaviour or activity is checked, rather than having been positively negotiated in advance in ways that are developmentally appropriate. Language for behaviour management is used, but either it involves lengthy explanations that are beyond the child's level of verbal understanding or ability to comply, because parents seek to justify their instructions to the child and gain the child's compliance, or else the parents resort to short dictatorial prohibitions, characterized by "negative feedback tone" (Hart, Risley 1995: 151). Neither response is a positive support to language development.

Parents' own screen time has increased considerably, and digital devices are a key feature of almost every adult's life. Ready recourse to these devices when parents are with small children impacts the amount of face-to-face verbal interaction they have with them. Likewise, the desocialization of children's meals, where children eat separately or alone,

rather than as part of the family around the table, undermines their language development because they are deprived of hearing adults and older siblings talking and exchanging news. They may not even be expected to sit at a table to eat their meal, which is detrimental to digestion, and the trend of asking children what they would like to eat may have the effect of restricting their diet, because children given choice in the supermarket choose what they know, with their diet becoming increasingly limited, often leading to poor health and obesity.

Less movement

Small children growing up in the UK are less physically active than in previous generations. Their lives are time-constrained, so they are driven or pushed to their destinations rather than being given the time to walk. And walking is not just about the physical exercise, but about the connection with the wider environment, seeing and hearing things to talk about, and having conversations on the way. A frequent sight on UK streets is a child in a pushchair, facing forwards, well supplied with drink and treats, the parent pushing the child along with one hand and controlling his or her phone with the other, unaware of, or choosing to ignore the child's attempts to communicate.

Commercialization of play

One final societal change which is having a significant impact on children's overall development, but particularly on their language development, is the commercialization of play. In addition to digital entertainment, leading quickly on to gaming, the market is flooded with manufactured toys that are very specific in their purpose, for example, plastic food items to use with a fanciful plastic kitchen, or "programmable" toys that the child can get to move or make noises by pushing buttons. Another of Healy's (1998) early warnings was of the effects of over-stimulation on children's play. Where the purpose and function of the toy is very specific there is less scope for children being prompted to use their imaginations to create their own narratives and play scripts, and there is strong and worrying evidence that children's creative imagination is being curtailed and diminished (Kim 2011).

The report by Law et al. (2017) clearly lays out the causal relationship between strong and effective early language learning and significantly better life chances, so the implications for children with observable language delay owing to the issues identified above are serious, particularly when support services are overstretched.

Programmes implemented in the UK to address both general and COVID-caused decline

Pre-COVID

Already prior to the COVID pandemic various initiatives had been launched in the UK to raise children's educational attainment in areas of social deprivation, for example the Sure Start Initiative in England, directed at the early years (Bate, Foster 2017), or the adoption of GIRFEC (Getting it Right for Every Child) in 2006 in Scotland (Scottish Government 2022). In 2009 Bookstart (2024) had begun outreach work to deliver books to all households with small children in England, Wales, and Northern Ireland, and similarly Bookbug (2024) in Scotland, while data from fact-finding surveys and longitudinal studies informing policy underpinned new initiatives such as Every Child a Talker (EcaT) in England (Department for Children, Families and Schools 2009) and PlayTalkRead in Scotland, also launched in 2009 (Scottish Government 2016).

Post-COVID

Examples of recent government-funded interventions to address the post-COVID concerns about children's language development are Nuffield Early Language Intervention (NELI) (Nuffield Education Foundation 2021), Talking Time (Dockrell et al. 2023), and Early Talk Boost (ICAN 2015).

   These schemes share a holistic, communication-focused approach, where teachers who have been trained as facilitators run short group sessions, typically of about 15 minutes twice or three times a week, following a set plan and actively involving parents and carers, with positive results to date. NELI may be delivered to individual children.

How an authentic Montessori approach resonates with these national initiatives

There are no barriers to these schemes being implemented in Montessori settings, and indeed they have been welcomed, but as they do not fit seamlessly into the work cycle of an authentic Montessori learning environment, since their focus is on developing group-based communication skills rather than individual language expression skills, there is scope for a Montessori intervention scheme also.

   At this juncture it is worth briefly itemizing and reflecting on certain key elements, integral to the set-up and organization of authentic Montessori learning environments both indoors and out, that together form a network of continuous holistic support for children's language development. While some of these elements might be individually identified in non-Montessori settings, to find a synchronized network with all of them as its components would be rare.

In the present context, the most important of these elements is the fact that individualized learning is the norm in Montessori early years settings and each child's development is supported holistically, with regular and detailed observations as an indispensable tool. Generally though, Montessori early years environments are noticeably quieter than those of other settings, so children can hear what is being said much more clearly, and most of the time the children are able and encouraged to talk to each other whenever they like. Dockrell et al. (2023) noted that it was sometimes difficult for schools implementing Talking Time to find a quiet location.

Authentic Montessori provision focuses strongly on language development with consistent emphasis on strengthening listening skills, and very early introduction of oral phonic and grammar games and activities prepares the children for later work with letters and sounds. Unlike Talking Time, where vocabulary was embedded and staff were not made specifically aware of the target words (Dockrell et al. 2023), in Montessori classrooms new vocabulary is deliberately taught, usually three words at a time, by a "three-period lesson", where the practitioner isolates each word in succession by placing either an object or a picture representing the word in front of the child to look at and handle, thereby significantly reducing the child's referent selection problem (Samuelson, McMurray 2017). The practitioner clearly enunciates the words several times (period 1); then the items are laid out together and the child is invited to indicate the one named by the practitioner. This identification process is repeated quite a number of times, with challenges presented by the practitioner varying the order, speed and tone of the prompts or changing the position of the items on the table (period 2); and finally, with each item isolated again, the child is invited to name it (period 3). This process is multisensory and carefully structured, with reinforcement in the second period of the child's passive knowledge of the word, and testing his or her ability actively to express the word in the third period.

In a Montessori setting children acquire vocabulary describing size and dimension from Montessori three-period lessons given to teach dimensional adjectives. Three sets of solid objects, each containing 10 identical pieces differing only in size, are used to teach visual discrimination of dimension by grading the items in each set, at intervals of several weeks or months, in order of both increasing and decreasing size. Typically, variation in three dimensions (the cubes of the pink tower) is presented first, followed by the square-based rectangular prisms of the broad (or brown) stair, which vary in two dimensions, height and width, followed by the long (or red) rods, which vary only in length. The vocabulary taught with each set respectively, but only after the child has worked on several occasions with that set, is "big" and "small," "wide" and "narrow," and "long" and "short," with the first and the tenth piece of each set used as the concrete models for the three-period lesson. Here the three-period lesson teaches two rather than three words. Experience with these materials confirms that this order of presentation aligns with the children's ability physically to discriminate between the dimensions, so it would be interesting to discover whether children were already using the language in the order given by O'Grady and Cho (2011) for their steps 2 and 3, before having mastered the physical materials.

Movement is deliberately designed to be integral to as many language-learning opportunities as possible so neural connections are formed and strengthened. This is a particularly important aspect of the little dramatizations, referred to as "exercises of grace and courtesy" by Montessori practitioners, which model and practise the conventions of speech and actions needed in everyday social situations.

As in other early years settings, in Montessori settings, movement features in action songs and rhymes, helping to embed and reinforce new vocabulary. Poetry, as distinct from rhyme, should be actively encouraged because of the richness of the cadence, rhythm, and intonation of language that it offers children.

Finally, as in any early years setting, reading stories features prominently, but rather than whole-group activities at set times, in Montessori settings these are mostly impromptu, involving one or two children or a very small, spontaneously formed group, allowing for open-ended comment, discussion, and appreciation of all aspects of the story. Sometimes stories are told, rather than read, and there is scope to develop the rich art of story-telling much more extensively among all early years practitioners.

Proposing a Montessori system of enhanced support for language development

Underpinning theoretical considerations

Other aspects of Montessori theory are particularly relevant to the planned project. Montessori training is based on child development, and practitioners holding full Montessori diplomas are equipped with a comprehensive theoretical knowledge of the timeline of language acquisition developed by Montessori (2017). The infant's progression from the articulation of sounds to syllables to words, and then on to grammatical inflection and syntactic organization of words into phrases, then sentences, is well understood by practitioners and is facilitated by the specially devised materials in the language curriculum area of Montessori settings. Similar orderly sequential development has been noted by O'Grady and Cho (2011) specifically in children's acquisition and use of bound morphemes and certain functional categories of speech, such as articles and auxiliary verbs.

The "explosion of writing" witnessed by Montessori (2017: 237) in children at around age 4 is significant. She interpreted this phenomenon as "something which arose from the formative energy of the children," an outward sign of the correlation between the inner sensibility or "sensitive period" for language, experienced by children from birth to around 6, and an unconscious need to develop their language however possible, driven by the ideas they wanted to express (Montessori 2012: 17).

Unlike today's children, those Montessori worked with must have had very little exposure to either printed materials or tools for writing, so the "explosion" of writing was more striking then than now. However, reflecting on how the physical movements involved in learning to write later parallel the progression of physical movements practised by babies as they learn to articulate the sounds of the language being spoken around them, led Montessori to see

a definite correlation between learning to write letters and development of oral language: "writing helps in teaching speech" (Montessori 2017: 271), so developing writing skills is an essential part of the proposed scheme.

Unlike other early years curricula the Montessori curriculum builds the acquisition of skills for writing in a gradual, systematic and progressive way, firstly strengthening children's fingers and hands in a variety of ways in preparation for holding their pencils correctly, then introducing the "insets for design", 10 square metal frames or stencils, each containing a different knobbed geometric inset, and as a set, presenting progressive challenges to the children, and supporting them to gain full pencil control before embarking on forming the letters of the alphabet, which they do first by feeling and recognizing the sandpaper letters and then by starting to write them (Montessori 2017).

What form should the proposed scheme take?

As individualized work is the norm in a Montessori classroom there should be no need for special sessions, just the usual Montessori one-to-one specifically planned lessons, giving no sign that a supported child is being singled out for special attention.

Repetition and reinforcement are key. Some children learn a new word instantly. Others may have to hear it up to 20 times before it becomes part of their word stock (Uchihara et al. 2019). This means the proposed scheme should include observational evidence on how quickly a child assimilates new vocabulary, so that enough prompts, reminders, and ideas are planned to effect an appropriate number of repetitions.

Appealing to the child's interests ensures greater engagement. New vocabulary presented to children should give them the tools to express their thoughts about what is important, exciting, and fascinating in their world. Practitioners need to make a determined effort to ensure new words learnt keep cropping up, in conversations, songs, stories, and rhymes so that they become permanently embedded in the child's lexicon.

The proposed starting point for working to support a child are three 30-minute naturalistic observations, focusing on the child's speech. The named practitioner with responsibility for carrying out the dedicated support for the child undertakes the observations, making both contemporaneous notes and a digital recording of the whole observation. These initial observations, and similar ones conducted later at set intervals, give a record of the time and length of each separate utterance or connected sequence of utterances, the social or occupational context, and a verbatim record of the sounds and words expressed by the child.

The data from the initial observations are then collated, written up, and analysed, forming a "Baseline Assessment" establishing the point the individual child's language development has reached at the date of observation and forming the basis of a unique profile of the child's language enhancement journey, which will continue to be recorded. Based on the collated data from each observation, targets will be set to be worked on with the child in each of the four main language areas and individualized work plans created, always

keeping in mind the need to engage the child's interests to give a meaningful context to the work being prepared, and to build on and extend from what the child already knows and is confident in expressing.

At regular intervals, possibly every two weeks, a review is carried out of how the targets set have been met, and what new ones will be set going forwards. After an agreed interval, possibly 6 weeks, the practitioner carries out another series of observations and again collates the data, noting the difference between the original points and the new points of attainment.

Evaluation

The scheme enables the child's progressive acquisition and mastery of various elements of spoken language with reference to the original baseline assessment at pre-determined points to be recorded and quantified. The recording supports planned re-visiting and extension of use. Focused enrichment of vocabulary related to the child's interests, and emphasis on grammar and syntax build a strong framework which supports extended comprehension and facilitates communication generally. A final report is compiled for a supported child upon leaving the setting.

Next steps

A small pilot study will be set up to enable development of training materials for the facilitators and to monitor how the scheme works, noting changes and adjustments needed before a general launch. Contact the author for more information and templates to use for baseline assessment and on-going recording of progress, guided observation, and individual planning.

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