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Interactive Apps and Narrative Writing

Dr Jill Dunn (Stranmillis University College) Dr Gene Mehigan (Marino Institue of Education) Dr Mark Ballentine (Stranmillis University College)









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Acronyms

The following acronyms are used throughout the report:

CCEA	Council for the Curriculum Examinations and Assessment
BERA	British Educational Research Association
DENI	Department of Education Northern Ireland
DES	Department of Education and Skills
EEF	Education Endowment Foundation
ETI	Education and Training Inspectorate
FSM	Free School Meals
GDPR	General Data Protection Regulation
NI	Northern Ireland
NIC	Northern Ireland Curriculum
NCCA	National Council for Curriculum and Assessment
ROI	Republic of Ireland
SCoTENS	Standing Conference on Teacher Education North and South
SEN	Special Educational Needs
UN	United Nations
UNCRC	United Nations Convention on the Rights of the Child

Chapter 1: Introduction

The purpose of this chapter is to provide an introduction to the study, its background, context and aims. It concludes with an outline of the key research questions that the study aimed to address.

Background to the study

In a recent Briefing Paper entitled 'Education across the island of Ireland: comparing systems and outcomes', Roulston (2021) argues that the curriculum, pedagogic approaches and assessment in the Republic of Ireland and Northern Ireland are markedly different and he asserts that there is a need for both jurisdictions to learn from other systems and to move towards systems of education which meet the needs of all, and not just a privileged few. From its establishment in 2003, as a safe space for teacher educators to come together and discuss issues of common interest and from its deep rooted commitment to quality teaching and learning for all (Standing Conference on Teacher Education, North and South[SCoTENS], n.d.) the SCoTENS Seed Funding Scheme is ideally situated to allow this learning about specific issues in education to take place.

One such issue in education is the teaching of writing in the primary classroom. Good writing is not only essential to students' success in school it is pervasive in the world of work (Graham et al., 2015). This prevalence of writing in everyday life exacts a toll on those who do not learn to write well and can limit personal attainment (Graham, 2006). The complexity of writing means that teachers face many challenges in teaching it, yet supporting children to generate and share their thoughts in authentic writing experiences is crucial (Gerde et al., 2019). It has been suggested that there is far less research on the teaching of writing than on the other elements of the 3 Rs (reading, writing and arithmetic) (Slavin et al., 2019). Given the influx of new technologies in everyday life and also within the classroom, there has been a growing body of research which is beginning to identify some of the affordances of digital technology within literacy (Kucirkova and Sakr, 2015). Dunn and Sweeney (2018) argue for thoughtful and intentional use of technology to allow for children to be engaged in learning in ways that are meaningful, creative and allow children agency in developing texts which resonate with their everyday technoliteracy practices.

Policy context on writing in the primary classroom

The Northern Ireland Curriculum (NIC) was revised in 2007 and the Council for the Curriculum Examinations and Assessment (CCEA), which advises the government on what should be taught in NI schools, states on its website that Language and Literacy is an Area of Learning in the curriculum which focuses on developing children's language and literacy skills. They report that these skills enable children to interact effectively in the world around them, express themselves creatively and communicate confidently (CCEA, 2023a). Within the NIC guidance on writing at Key Stage One (Primary 3 and Primary 4, children aged 6 to 8) it states that pupils should be enabled to talk about and plan what they are going to write, express thoughts, feelings and opinions and be able to structure and present their ideas using traditional and digital means (CCEA, 2007).

A revised Primary Curriculum Framework was introduced by the National Council for Curriculum and Assessment (NCCA) on a phased basis from 2016 in Ireland with full implementation from 2019 with a three-year cycle of support. The Department for Education and Skills (DES, 2019) states that the curriculum recognises and supports teachers as skilled professionals with the autonomy to make key decisions about teaching and learning in their own school, to include decisions about what children learn, the sequence in which they learn, the pace at which they learn, and the activities and experiences through which they learn.

There are three strands in the Primary Language Curriculum — oral language, reading and writing. Within this curriculum learning outcomes are used to describe the expected learning and development for learners at the end of a period of time. Learning outcomes for writing in first and second class (ages 6 to 8) indicate that pupils should write with a sense of purpose and audience while creating texts in a range of genres and other languages where appropriate, be able to enjoy writing to communicate with others, and explore the aesthetic, creative and imaginative dimensions of language in their writing (NCCA, 2019).

It is clear that there are a lot of similarities in the Curriculum requirements for the teaching of writing for children at the same stages of education in the different jurisdictions of Northern Ireland and the Republic of Ireland.

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COVID-19

The application for this project was made in 2020 with anticipation that the project would run in the 2020–2021 academic year. However, the sudden arrival and consequences of the COVID-19 pandemic made this impossible due to the extensive disruption to education, closure of schools, the move to online learning and the added pressures on teachers and children. The project required being able to go into classrooms to work with groups of children. Understandably, even when teachers and children returned to face-to-face teaching in primary schools, many schools were reluctant to open their doors to people from outside the school community and therefore, the gathering of data for the project was significantly delayed. Added to this, as an aftermath of the pandemic, was a wider educational debate on 'lost learning', discussions around a 'catch-up curriculum', the loss of routines and friendships and its impact on learning and wellbeing and how this impacted disengagement from learning. These issues were not part of the original thinking around the project, yet they could not be ignored and brought a new dimension to the project. Education had to consider its response to the COVID-19 challenges and in Northern Ireland, the Education and Training Inspectorate (ETI) considered a series of Learning Insights in their Stepping Up and Stepping Forward document (ETI, 2021). They acknowledge that COVID-19 had a greater impact on children from disadvantaged backgrounds (Learning Insight 3), that teachers needed to use the flexibility that was embedded in the NIC to enable learning (Learning Insight 7) and that effective use of technology in learning needs to be built upon (Learning Insight 10). In this new, post-pandemic world, the original project had strong relevance.

With all of this background to the importance of shared learning across different jurisdictions, the requirements of the different primary curricula and a shifting landscape for education post COVID-19, the research questions which guided the project were:

RQ 1: To ascertain the views of young primary school children, in areas of social disadvantage, on:

- Their enjoyment and engagement in writing in and out of school
- Their use of digital tools in writing in and out of school

- The use of Amazon Alexa's 'Magic Door' app in co-creating oral stories
- The use of the co-created stories in writing fairy tales

RQ 2: To ascertain the views of their teachers on:

- Their perception of children's enjoyment and engagement in writing in and out of school
- Their views of children's use of digital tools in writing in and out of school
- Their views on the potential of Amazon Alexa's 'Magic Door' app in helping children to develop skills in creating oral and written stories

Chapter 2: Literature Review

The purpose of this chapter is to present some of the key literature on the associated areas of children's writing, educational disadvantage, writing and digital technology and adult and child perspectives in research. This aims to set the scene for this study and to allow some initial understanding for the purpose of this research.

Children's writing

Writing plays a prominent role in everyday life. Graham (2018) outlines how it is used to keep us connected to other people through a broad range of social media and networks, to record information, express feelings, create imaginary worlds and explore meaning. Indeed, Ryan et al. (2021) suggest writing is arguably the most important measure of success in literacy education and it dominates as an assessment tool across educational systems. The writing skills of pupils are understood to be a gateway for college success, employment and promotion in the workplace (Graham, 2018). Hence, writing, along with reading, has long been acclaimed as one of the twin peaks of literacy and a central gain from education (Beard, 2000). Therefore, the teachers of beginning writers in the early years have a huge task in promoting and encouraging confidence in pupils' abilities to write, providing opportunities and purposes for writing, engaging children's interests as active participants and inspiring and motivating children to be immersed in the process of writing (Jones and East, 2010).

However, early writing is described as a 'highly complex task' (Quinn and Bliss, 2021, p232) and 'one of the most challenging endeavors we offer the young child' (Myhill, 2001, p1). It is even described a tantamount to a game of chess with many different aspects having to be carefully choreographed to produce a final written piece (Kellogg, 2008). The Education Endowment Foundation [EEF] (2020) concurs with this and highlights that writing is a challenging skill to learn, yet they emphasise the need for effective writing instruction to open up opportunities for success across the curriculum.

One of the elements within the complexity of writing is the range of genre that requires to be taught. A genre-based approach to teaching writing involves explicitly teaching the features of different text types and this has been the dominant pedagogical approach to teaching writing in primary classrooms for several decades (Clements and Tobin, 2021). One such

genre is narrative writing which engages children's imaginations and requires them to draw on their personal experiences and stories they know from books, film, and TV. Collins (2010) suggests that the question of how children develop their narrative writing is complex with some children acquiring skills in developing characters and plots through wide reading. Weaker readers, or children who do not read often, will require explicit teaching in features of narrative writing including character descriptions and narrative structure to aid them in their craft of writing stories (Collins, 2010).

Unfortunately, many children do not receive the writing instruction that they deserve or need (Graham, 2019). Research indicates that teachers' views on what constitutes good writing may impact their writing pedagogy (Mariano et al., 2022) and that their efficacy in teaching writing (their belief they can affect student learning) is related to their practice in teaching writing and also pupil outcomes in writing (Tchsannen-Moran et al., 1998). Hence, there are calls for further professional development to strengthen teachers' efficacy beliefs in the domain of writing instruction (Rietdijk et al., 2018). It is essential that the complex, messy yet rich and rewarding act of writing should be at the heart of best practice in the primary classroom (Quigley, 2022).

There has been a number of research studies looking at the writing practices which appear to be most effective in improving the quality of primary school children's writing. One such study by Graham et al. (2015) conducted a meta-analysis of writing intervention studies and included qualitative studies which examined the practices of exceptional literacy teachers. Based on this, they suggested a number of research-based writing practices including: creating a positive, supportive writing environment that is pleasant and motivating for children and using 21st-century writing tools. Similarly, Slavin et al. (2019) reviewed research on writing programmes for children in England and the USA and proposed that a key characteristic of effective writing programmes was building students' motivation to write and enjoy self-expression and using cooperative learning. Likewise, in their paper on the practices of effective writing teachers, Gadd and Parr (2017) identified the importance of teachers cultivating a sense of ownership in learners. There are many overlaps in these research reviews on writing and a picture is being built of the importance of motivation, enjoyment and ownership in writing (Clements, 2023).

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The argument that fun and enjoyment is an essential element of learning has long been celebrated (Tisza and Markopoulos, 2023) and much has been written about children's enjoyment of a play-based approach to learning (Walsh, 2017). However, teachers are often confused about how they might captivate the interest and engagement of young children through the medium of play yet still ensure that they meet required academic goals. Sproule et al. (2021) argue for 'infused playfulness' as an effective pedagogical tool and Barrett (2005) continues this theme of fun and argues that learning can be fun even when it is hard, challenging and stretches learners. This 'hard fun' is still 'fun with enjoyment, laughter, freedom, creativity and energy' (Barrett, 2005, p162). However, children's enjoyment of writing currently appears to be lacking. The annual literacy survey, carried out by the National Literacy Trust across the UK (Clark et al., 2023) reports that only 1 in 3 children and young people said that they enjoy writing in their free time and only 1 in 5 of them write something daily in their free time. The authors note that enjoyment of writing is at one of the lowest levels since the survey began in 2010. Indeed, they claim that children and young people's writing in 2023 'continues to be at crisis point' (Clark et al., 2023, p1) and they argue that urgent coordinated action is needed to transform writing into a pleasurable, personal practice. They further concluded that the COVID-19 pandemic in 2020 had an impact on the writing enjoyment of children and young people regardless of their gender, age or socioeconomic status. Levels of writing enjoyment recovered somewhat in 2022 but have decreased across the board again in 2023. However, boys on Free School Meals (FSMs) saw a particularly pronounced drop in writing enjoyment between 2020 and 2021 with a recovery in 2022 and a decrease again in 2023 (Clark et al., 2023). A review of the impact of COVID-19 on learning in the UK indicated that there is some evidence that the writing outcomes for primary-aged children were lower than expected compared to previous year groups. They further reported a widening of the disadvantage gap for Year 1 children in writing (EEF, 2022).

Educational Underachievement

Educational underachievement is recognized as a significant and complex challenge. Purdy *et al.* (2022) state that numerous academic and policy reports have highlighted the persistent problem of underachievement of some pupils within the Northern Ireland education system. Whilst they highlight working class, Protestant boys as one identified group for whom educational underachievement is significant, they also contend there is a more complex

reality beyond this stereotype. Harris et al. (2021) argue that the COVID-19 pandemic, with the massive disruption to education, has also likely widened educational disparities. They particularly highlight the 'digital divide' and 'lockdown learning gap' on the effects of socioeconomic inequality in education (Harris *et al.*, 2021, p26). The Expert Panel on Educational Underachievement in Northern Ireland was tasked by the Minister for Education in NI to examine the links between persistent educational underachievement and socioeconomic background. In their report, A Fair Start (Purdy et al., 2021) they highlighted a key area of redirecting the focus to Early Years. Whilst this focuses the underachievement debate on providing support for families and early childhood education before children start school, it also highlights that 'it is imperative that early support is provided when underachievement is visible and before it becomes entrenched' (p1). It also emphasises the seamless journey from pre-school to school and beyond 'where every child is provided with the appropriate level of support needed in a timely and appropriate manner in order to realise their potential' (p1). The most recent Chief Inspector's Report in Northern Ireland also recognized children's underachievement in primary school and stated that 'too many underachieve' and that they 'struggle to learn in underperforming schooling' (ETI, 2018, p12). One of the ETI's recent Learning Insights in response to the COVID-19 pandemic is that COVID-19 has had a greater impact on children from disadvantaged socio-economic backgrounds (ETI, 2021). They urge that 'we need to find solutions to the disadvantages that affect many of our learners' (p14).

Writing and digital technology

Digital technology has been making its way into classrooms since the 1980s (Vongkulluksn et al., 2020). Since its introduction in education, Selwyn (2021) argues that the use of digital technology has always been a forward-looking and optimistically minded endeavour with the view that these technologies can be used to improve learning and teaching. Indeed, technologies should be considered as supports for developing new practices to facilitate children's learning (Ferrière and Ailincai, 2022). It is argued that the proliferation of digital technology, such as tablet computers, laptops, and interactive whiteboards is changing the way in which literacy is taught (Quinn and Bliss, 2021). This can include the opportunity for children to develop multimodal approaches to literacy learning (Rowe and Miller, 2016) and opportunities for motivating and engaging children in literacy (Canning, et al., 2017). There is also the potential for digital technology to give children the necessary support to compose

writing in creative ways and to provide them with exposure to literacies in new contexts (Quinn and Bliss, 2021). This is an exciting potential opportunity in the current climate where children are more disengaged from writing than ever.

However, as Vongkulluksn et al. (2020) point out, the promise of digital technology can only be realized when teachers are able to meaningfully implement these technologies in the classroom. Indeed, teachers are often cited as the key players in this integration of digital technology and it is argued that it is their responsibility to ensure that pupils do not experience a digital division due to a deficiency in the use of digital resources (Mensan and Anagün, 2022). There have been discussions in the literature about teachers being hesitant and even sceptical about the use of digital technology (Aldhafeeri et al., 2016). Yet Mertala (2017) argues that the vast majority of early childhood educators feel positive about using technology with children and Jack and Higgins (2019) also report that technology is more embedded in early years practice than recent literature has suggested. The COVID-19 pandemic has had a major impact on education in many dramatic ways, but one of these was framed as a positive impact in the workplace where teachers were forced to develop their technology skills as they explored new methods of teaching using technology (Crawford et al., 2021). Hence, there is an opportunity to build on these newly developed skills to investigate new opportunities for literacy learning in the classroom and to consider new opportunities for re-engaging children in story writing.

Perspectives from within the classroom

Teachers' beliefs about writing inform their practices of teaching writing; however, Gerde et al. (2019) report that, to date, it is unclear how early years teachers conceptualise the importance of writing. They further argue that there is a need to understand what professional learning experiences teachers need in order to support them in changing their beliefs and practices around the teaching of writing. This is further supported by Mariano et al. (2022) who assert that teachers need to be conscious of and reflect upon their views of writing in order to support pupils in achieving writing outcomes. However, teachers' perspectives are not the only perspectives from inside the classroom walls, children themselves have important views to share. Article 12 of the Convention on the Rights of the Child (UNCRC) (UN, 1989) highlights children's rights to both express their views and participate in decision making about matters which affect them (Huser et al., 2022). The field of Childhood Studies takes the perspective of children as agentic, who are competent and expert in their own lives (James and Prout, 1997). There is a plethora of research which focuses on children's voices and Anning (2003) suggests that in exploring children's voices we are positioning children as competent, expert informants about their own learning. Going further, Tay-Lim and Lim (2013) suggest that by foregrounding children's voices, educators and researchers are ensuring that we are accountable to children. Children may have different ways of expressing their voices which may reach beyond words or sentences (Wall et al., 2019) and creative approaches are required with opportunities for children to express themselves through arts-based activities (Cassidy and Robinson, 2022). Indeed, it is well understood that 'voice is not enough' (Lundy, 2007) and the Lundy Model of Child Participation (Lundy, 2020) argues for space (the opportunity for children to express a view), voice (children being facilitated to express their views), audience (the view must be listened to) and influence (the view must be acted upon). Baroutsis et al., (2019) assert that there is a new urgency for examining children's writing practices and how children learn to produce texts to communicate using print and digital technologies and they argue for the increasing importance in listening to, and gathering, children's perspectives on this issue. Indeed, consultation with children can contribute informed knowledge about the issues under consideration (Dunn, 2015). After all, as Loris Malaguzzi claimed, 'things about children and for children are only learnt from children' (Edwards et al., 2012, p30).

Chapter 3: Methodology

This chapter sets out the methods used in the study, to meet the set objectives. There is a brief rationale for the design of the study, an outline of the participants, data collection and data analysis. The chapter concludes with an overview of the ethical procedures followed in the study.

Design

The research took a constructivist approach viewing people as dynamic, social beings who interact with others to construct joint meanings within a given context (Greig et al., 2007). The research also took a children's rights perspective with a view that children have a right to be heard on matters that affect them (Harcourt and Einarsdottir, 2011) and that they are capable in doing so as they are the experts in what it means to be a child in a primary classroom today. The following qualitative methods were employed in addressing the research questions:

- 1. Focus group interviews with children pre-writing intervention (see Appendix 1)
- 2. Focus group interviews with children post-writing intervention (see Appendix 2)
- 3. Semi-structured interviews with class teachers (see Appendix 3)

The focus groups with children included some participatory exercises where the children were involved in practical activities where they selected emojis to show their feelings, sorted statements under true and false headings, and sorted pictures to show ideas for writing and favourite lessons (see Appendix 4).

Participants

One class teacher and six children in each of two primary school classes in Northern Ireland and two primary school classes in the Republic of Ireland participated. This was a total of four class teachers and 24 children. As the study was focusing on educational disadvantage, the schools were selected from areas of lower socioeconomic background. This was based on eligibility for Free School Meals (FSM). This is widely used as a proxy for socio-economic status in academic research. Whilst it is recognised that FSM is not a perfect proxy for socio economic disadvantage, it is argued that it does come close to identifying such a group (Taylor, 2018). These schools were selected from the school placement partner schools of the respective institutions, and were chosen on the basis of available infrastructure, commitment, and prior working relationships with the researchers (Miles, Huberman and Saldana, 2019). The children were from Year 3 in Northern Ireland and First Class in the Republic of Ireland and were aged between six and seven years old. They were selected by the class teacher based on their disenchantment with writing and their dispositions to chat with a visiting adult researcher.

Procedure and Data Collection

Phase 1

Following preliminary planning visits to the four schools, each researcher visited their schools to carry out focus group one with the pupils to gather their views on writing narrative stories. This lasted around 30-40 minutes per group.

Phase 2

This phase of the research project involved using the Amazon Alexa Magic Door interactive app with the children and developing written stories from it (See Appendix 5 for information on the Amazon Alexa Magic Door App). On this visit to each school, the interactive app was introduced to the children and they constructed an oral story as a group using the app. They drew story maps of the story as it developed. This session lasted between 40–60 minutes. Over the next week, another visit was made to each school, and these story maps were used to write the narrative stories. The children were presented with a word bank based on the oral stories and story maps that were constructed in the previous session which they could use if they wished. This session lasted around 40-60 minutes.

Phase 3

On completion of phase 2, a second focus group was carried out with the children to ascertain their views on using the Magic Door app and how it impacted their perspectives on writing. Teacher semi-structured interviews were also conducted to explore their experiences and views of teaching narrative writing and their opinions on the potential of interactive apps for narrative writing in the primary classroom.

Data Analysis

Following transcription of the recorded data, thematic analysis was used to identify, analyse and report themes from within the data and the findings will be discussed under the emergent themes from the teacher and child perspectives in the following section.

Ethics

The Ethical Guidelines for Educational Research, presented by the British Educational Research Association (2018) were followed throughout the project. Both researchers are fulltime lecturers, vetted by their respective jurisdictions for the purpose of school placement visits, and the host primary schools are partners of their universities.

Ethical approval was granted by both Stranmillis University College and Marino Institute of Education individually.

Following visits to the partner schools to explain the research study, written consent forms from the school principals and participating class teachers were obtained. Letters of information were distributed to the parents of the pupils, and once these signed consent forms were received, children were then invited to give their own assent to participate. All participants were advised that participation was voluntary and they were made aware of their right to withdraw at any stage of the project. However, no one availed of this right. Participants were also assured of anonymity and confidentiality as part of their involvement in the project.

All data from the study was held securely on password protected PCs and followed the guiding principles of GDPR regulations.

Chapter 4: Children's Perspectives

This chapter presents the views of the children on writing before the writing intervention (using Amazon Alexa's The Magic Door app) and also after the writing intervention.

Focus groups 1 (pre-writing intervention)

Enjoyment and engagement in writing in and out of school

Pupils across the focus groups, were largely writing stories (and poems in one group) around topics given to them by their teachers. For example, religious, historical, social, book, fairy tale, or holiday-related topics:

"St Francis and the wolf", "World War Two", "The Lego movie", "we were writing about what was in our books", "I was writing all about Halloween", "The Queen's Jubilee", "The Red Riding Hood", "Rapunzel", and "we're writing about Irish."

There was a mixed response across all focus groups in respect to perceived difficulty of writing stories. They ranged from:

"Way too hard", and "well not too easy. Maybe a little easy and a little hard", "in the middle", to "very easy."

As shown in Table 2, when presented with a series of sentences, 52.2% of pupils responded true for 'I think that writing stories is hard', compared with 47.8% untrue, nearly a 50-50 split.

One pupil expanded on their perception of the difficulty of writing, focusing on their feelings and the feelings of others, highlighting an awareness of the range of perceptions of difficulty amongst their class peers:

"So, lots of people are gonna in the middle I don't feel really happy. But I don't feel really sad and some of us might be."

When asked whether they were happy, sad, or not sure, when writing (Table 1), pupils tended to be towards the happy end of the spectrum (30.4%) (although this varied across

focus groups), with significant numbers who were unsure (52.2%), and 17.4% said it made them sad.

Table 1. Frequencies and percentages of pupils responding 'happy', 'sad', or 'not sure' whenthey are writing.

Happiness	Нарру	Sad	Not sure
Focus group 1	2	2	2
Focus group 2	2	0	4
Focus group 3	3	0	2
Focus group 4	0	2	4
Total	7	4	12
%	30.4	17.4	52.2

There was also a mixed response across all focus groups, when the pupils were asked if they enjoy writing stories with their teacher:

"Definitely not", "sort of", and "definitely."

This was confirmed when the pupils were asked to respond to a series of sentences about writing (Table 2). There was almost a 50-50 split for answering true/untrue for 'I love writing stories', and the same for 'I don't like writing stories', with a small positive lean towards loving writing. Interestingly, 60.9% also responded that 'I enjoy it when the teacher gets us to write stories' as true.

The pupils who responded in the neutral-to-positive range, generally conveyed enjoyment of writing, with three emerging themes, in that some pupils noted an interest in writing about topics that interest them, in creative writing-related tasks such as drawing, and the freedom to write and pick their own topics: "Like about Disney Princesses", "painting and drawing", "I love that I can write. It's just fun that I can just write all around the place", "Because ... sometimes we have to make our own kind of story", and "Only if I get to pick it though."

Pupils were specifically asked what their favourite topics are to write about, revealing a series of topics that relate to their interests. Interestingly, pupils who write at home (in their own time), are writing about their interests.

"I like writing about space", "I like writing about football cos I play", "About my dog", "I write about cats", "I write about Disney princesses", "I would write about candy castles", and *"Uggy Wuggy is like a TV show and a toy and it a game."*

Many children showed their creativity with 60.9% of pupils responding that the sentence, 'I have lots of ideas when I am writing stories', is true (Table 2). In fact, a few pupils, who stated that they enjoy writing, discussed how they enjoy it because they get to use their imagination and make up their own stories:

"Yes... Because you get to pick what story you want to write and make things up and all", and "I just sometimes just like make up things and put it in a story."

Some pupils also enjoyed writing-related tasks such as drawing pictures:

"you can make different pictures and you can make them like realistic", and "I like writing like I like drawing pictures in the book."

One pupil directly associated making up stories with visualisation of ideas or creating images in their head:

"I like making the words up. Cuz then it like makes a picture in your head."

This indicates a potential linkage between writing about topics of interest, making up their own stories through use of their imagination, and writing-related drawing, and the enjoyment of writing stories.

In contrast, pupils who responded in the more neutral-to-negative range, noted two consistent themes, namely, that writing stories takes too long and is boring, and that writing hurts their hands. This latter point was a common response. These pupils also appeared to

be from classrooms where their writing topics were more generalised, directed, and controlled by the teacher.

"I don't like it because it takes so long and when I do it my hand gets really sore", "It hurts my thumb", "It takes so long"; and "It's kind of boring."

Interestingly, 78.3% of pupils responded that 'it is important to learn to write stories' is true (Table 2). Thus, irrespective of varying degrees of enjoyment and perceived difficulty, due to the aforementioned reasons amongst a portion of the pupils, many do in fact recognise the importance of learning to write stories. However, there was a slight negative tendency towards wanting to write more in school, with only 39.1% of all pupils responding true, and 8.7% undecided for the sentence, 'I would like to write more stories in school'.

There appeared to be a trend, to some extent, relating perceived difficulty of writing stories, with enjoyment of writing, and writing at home, amongst many of the pupils. For example, there were pupils who stated higher difficulty, that found writing not enjoyable, and who also didn't write at home. In contrast, there were pupils, who stated lower difficulty, that found writing enjoyable, and who also appeared to be writing at home. Thus, writing at home is either potentially connected with lowering the difficulty of writing, and raising enjoyment levels, or pupils who find writing easy, and enjoyable, are more likely to write at home.

Boys also appear to be, generally, less likely to write at home than girls. When boys in one focus group were collectively asked if they write at home, they responded:

"No."

This divisiveness amongst the pupils in respect to writing at home was reaffirmed, as there was almost a 50-50 split, when pupils were asked to respond true/false for the sentence, 'I write stories at home sometimes' (Table 2).

Most pupils, when asked who helps them at home, would say their mother. Help with spelling and reassurance is a regular theme:

"My mum", "My mum helps me a lot, because I can't really like spell", "She helps me like if I need help spelling and whether she can help me", and "sometimes I asked my mom is the front cover looking good." However, some of the pupils stated that they do it themselves without help:

"No, I do it", and "Myself."

Table 2. Percentages of pupils responding 'true', 'false', or 'undecided' in respect to a range of sentences about writing in and out of school.

Sentence	True %	False %	Undecided %
I love writing stories.	52.2	43.5	4.3
I think that writing stories is hard.	52.2	47.8	0.0
It is important to learn to write stories.	78.3	13.0	8.7
I enjoy it when the teacher gets us to write stories.	60.9	30.4	8.7
I write stories at home sometimes.	52.2	47.8	0.0
I would like to write more stories in school.	39.1	52.2	8.7
I don't like writing stories.	43.5	56.5	0.0
I have lots of ideas when I am writing stories.	60.9	34.8	4.3

An additional theme emerged around spelling and grammar. Several pupils from different focus groups, who found writing stories difficult, and not enjoyable, responded, when asked, that they did not know all the words needed for writing stories or struggled with spelling and grammar. Thus, spelling and grammar represents an additional contributing factor in perceived difficulty of writing:

"No, not really", "Because I don't know how to spell that good", "I have trouble spelling stuff as well", "I don't like when I get a word wrong", "Doing joined up handwriting. Yes, it's really hard", "All my finger spaces", and "When I forget to do like capital letter and whenever I forget to do full stops." One pupil also discussed the difficulty associated with having to multi-task, such as drawing and writing, with longer pieces of writing and having to try to spell words throughout this long piece of work. This indicates that even though most pupils appear to enjoy drawing, if the writing is too long, then it overrides such enjoyment due to issues such as having to focus on spelling for a longer duration. This pupil referred to confusion to describe such experiences, and described how it makes their head tired:

"I don't really like drawing, doing long, long, long, long books because then you have to all the time, try and spell the words correctly and it makes your head tired... And it's gonna take you a long time that spelling the word will get your all confusing, and you won't be able to spell the next word."

As shown in Table 3, 82.6% of pupils said that 'children's TV programmes and films' are the best help in respect to ideas for stories, followed by 78.3% for 'my own imagination', 73.9% for 'children's books', 60.9% for 'my teacher gives me ideas', and 47.8% for 'talking to my friends about ideas'. Interestingly, as discussed, many pupils discussed their fondness for writing about their interests, including TV programmes and films, and using their imagination to write stories.

Table 3. Percentages of pupils responding 'best help' or 'least help' in respect to ideas for
stories.

Ideas for Stories	Best help %	Least help %
Children's books	73.9	26.1
Children's TV programmes and films	82.6	17.4
Talking to my friends about ideas	47.8	52.2
My teacher gives me ideas	60.9	39.1
My own imagination	78.3	21.7

Only 52.2% of pupils favourited writing (the lowest), and 60.9% favourited reading (joint 3rd lowest), as their favourite lesson. The most favourited lesson was art with 91.3%, followed by PE with 87%, and science with 73.9%. Music was favourited by 60.9% of pupils, and maths (2nd lowest) by 56.5% of pupils (Table 4).

Table 4. Percentages of pupils responding 'favourite' or 'least favourite' in respect tolessons.

Lessons	Favourite %	Least favourite %
Writing	52.2	47.8
Reading	60.9	39.1
Maths	56.5	43.5
Science	73.9	26.1
Music	60.9	39.1
Art	91.3	8.7
PE	87.0	13.0

Use of digital tools in and out of school

Many pupils conveyed that they have not used iPads, tablets, or Amazon Alexa for writing a story at school, or at home. One pupil did note use of a home computer to write their own story, and that they enjoyed it:

"I did before. My Mam letted me use her computer to make my own story."

A few pupils did mention use of a tablet and writing related apps:

"Squeebles", and "Seesaw."

However, pupils in one focus group appeared to be more likely to have used iPads/tablets and writing associated apps compared with their peers in the other groups:

"I do it at home", "I use Sketchart", "We used in school like we can make your own like, place and all", and "it was called Scratch Jr."

Pupils who did use tablets and related apps discussed how they enjoyed the use of tablets and apps for writing and related activities, which appeared to be due to them using something different to traditional writing approaches, and which was more interactive in a 'play sense' making writing easier:

"Yeah, I love it", "Because we get to play on them", and "It's a lot easier."

Although, some pupils did convey some problems with using tablets and apps:

"When they die", "When they turn off when you're in the middle of a game", and "It takes for ages for them to turn back on."

Therefore, there is a persistent theme in that although these devices and apps are enjoyable, and make writing easier, there are still some problems associated with their use and reliability.

Focus groups 2 (post-writing intervention)

The results from analysing the follow-up focus groups are presented in this section.

Amazon Alexa's 'Magic Door' app and co-creating oral stories

The pupils remembered their experience of Alexa and the Magic Door app in detail, with many students recounting these details:

"I went to the door and then I popped out and then I went to a magic forest. I had a boat"; "We went to the dark forest"; "We went to a caravan"; and "Would you like to leave the caravan and I said yes. And then she kept saying would you like to meet the caravan? Kept saying yes, yes, yes."

The pupils conveyed a mixed response in respect to their perceived difficulty of writing their Magic Door story, with the majority leaning towards easy. 85.7% of pupils said that Alexa and the Magic Door app, made writing their stories easier (Table 2). Although, some pupils referred to issues such as sore hands, and annoyance with the approach.

"Easy"; "In the middle"; "Too hard"; "Because my hand nearly broke off"; "My hand was tired"; and "I think it was hard because at the end I started getting very annoyed."

76.2% said the experience made them happy, with 14.3% unsure (Table 1).

There was a general theme in that most pupils said yes that they enjoyed using Alexa and the Magic Door to write their stories (95.2%, see Table 2). In particular, the pupils commented on the content, fun (and sometimes humorous), and interactive nature of using Alexa and the Magic Door, also noting the ability to choose, how it was something new, and something they did not usually get to do.

"It was fun, and you get to listen to the Magic Door story"; "I enjoyed it because ... you don't get to do this"; "It's really fun because you get to explore places"; "I like ... listening to Alexa, opening the Magic Door, and telling us all about it. And writing it"; "Aww options"; "we get to like to use our imagination"; "Cuz it was really fun and you got to like to make the story ... and Alexa told to like, what to do and what the story was like"; "I really liked meeting the tiny men"; and "it was funny in bits." **Table 1.** Frequencies and percentages of pupils responding 'happy', 'sad', or 'unsure' whenthey are writing using Alexa and the Magic Door app.

	Нарру	Sad	Not sure
Total	16	2	3
%	76.2	9.5	14.3

In fact, 95.2% of pupils said that the Magic Door app made writing stories more fun (Table 2). 100% of pupils said false, to the sentence, 'I do not want to use the Magic Door app again'. However, only 57.5% said true, and 9.5% said unsure, to the sentence, 'I would like to use the Magic Door app in my class to write stories', potentially indicating some issues with their experience. There was a similar response to the sentence, 'I would like to use the Magic Door app to write stories at home sometimes', with 57.1% saying true, and 4.8% unsure.

Some pupils liked the 'surprise' element of the app:

"I like it because it's a surprise to see what's inside the egg"; and "I enjoyed it, because we got to, we didn't know what, what it was going to be in like the garden."

A few pupils noted some issues with respect to being unable to go to the places they wanted to (potentially an issue with the app):

"And I didn't really like it cuz Alexa kept going back"; "I didn't really like it cos Alexa was going back to the story and then she was choosing it her own way. Yeah, she was being a bit bossy"; "she didn't allow us to leave the caravan"; "No, no! Because you can't get it stuck in the caravan"; and "No I wanted to see the mailbox we didn't get to do it."

Interestingly, an additional theme did emerge, with some pupils discussing how they did a lot of interacting with the app, a lot of writing, and that they struggled with spelling:

"You have to go through a lot"; "we all done a lot of writing"; and "Some of the words were a little tricky."

Some pupils dislike writing stories in general irrespective of the use of the Magic Door app:

"I didn't really like it that much. Because usually for me it's kind of annoying when I write."

Table 2. Percentages of pupils responding 'true', 'false', or 'undecided' in respect to a rangeof sentences about writing using Alexa and the magic door app.

Sentence	True	False	Undecided
I enjoyed using the Magic Door app to write stories.	95.2	4.8	0.0
I think that the Magic Door app made writing stories more fun.	95.2	4.8	0.0
I do not want to use the Magic Door app again.	0.0	100.0	0.0
I would like to use the Magic Door app in my class to write stories.	57.1	33.3	9.5
I think that the Magic Door app made writing stories easier.	85.7	4.8	9.5
I would like to use the Magic Door app to write stories at home sometimes.	57.1	38.1	4.8
The Magic Door app helped me with my ideas for writing.	81.0	14.3	4.8
I have lots of ideas when I am writing stories and I do not need the Magic Door to help me.	40.0	55.0	5.0

Having been asked if they enjoyed being able to choose when writing their stories, the pupils responded largely yes, with a few saying no. When asked if they think they should be able to choose more, when writing stories, the pupils also mostly responded yes, again, with a few saying no.

The response was mostly positive when the pupils were asked if the ideas from the Magic Door app, helped them write their stories.

"Yeah"; "By using my imagination"; "she could tell you all about it. And you'd be able to write it"; "you can also make up characters and they don't have to be real characters"; and "Yeah, because it was helping us with helping us choose the characters that were in the story."

81% of pupils responded true, and 4.8% unsure, for the sentence, 'The Magic Door app helped me with my ideas for writing'. Interestingly, 55% said false, and 5% unsure, for the sentence, 'I have lots of ideas when I am writing stories and I do not need the Magic Door to help me' (Table 2).

Furthermore, the pupils were asked if the storymaps helped them with writing stories. They mostly responded positively, with one pupil noting the pictures as the thing they enjoyed the most:

"All the pictures"; "So you understanded the story"; and "Cos you can remember what happened from it."

As shown in Table 3, 81% of pupils favourited 'writing using the Magic Door app' lesson (3rd highest). Art was the most favourited with 90.5%, followed by reading and PE (joint 2nd highest) with 85.7%. Maths was the least favourited with 38.1%

Table 3. Percentages of pupils responding 'favourite' or 'least favourite' in respect tolessons.

Lessons	Favorite	Least favorite
Writing using the Magic Door app	81.0	19.0
Reading	85.7	14.3
Maths	38.1	61.9
Science	61.9	38.1
Music	66.7	33.3
Art	90.5	9.5
PE	85.7	14.3

Chapter 5: Teacher perspectives

Semi-structured interviews

Use of narrative writing in the classroom

All teachers said that they teach narrative writing in their class with differing descriptions of school and class-level implementation. The teachers discussed how they normally do different genres at different time periods:

"We do we come in normally around this time of year and we do...different genres but usually we go into narrative now we do scary stories, and we probably do it again in December Christmas stories and stuff but we try and do it maybe once a week."

"...our literacy coordinator...would like us to do it with you know, like, in your term planners that you do...narrative, and then you maybe do a wee bit of poetry, and you would do that over a six-week period... But I find for the younger children, sometimes, if I'm doing like, poetry for the full six weeks, you know, they're bored."

"Well, we just have different genres that we do each term..., we do in term one recount writing... And then we move on to term two, to narrative and a wee bit of sort of instructional. So, we do sort of three main ones, be it finishing with a wee bit of reports, because that sort of links back to our sort of recount sort of a little...bit... But narrative is basically my term three that we really get into it."

Likewise, one teacher noted use of myths and legends, film, and animation, on a term-basis:

"We were doing...myths and legends ... And then we also linked it to then our film and animation. So, they did little animations. And then they acted out their myths and the legends and we recorded them. So, I like to tie it in with the drama... you know, break it down...we talk about all this... all the sort of senses when we're thinking about story setting, and I try and get them to close their eyes and all those things that would be quite emotive to, to sort of get them involved."

Other teachers conveyed the use of a yearly plan, with writing every month, and everybody in the whole school doing the same thing, following a school procedure.

"Yeah. So, what we would do is we would have a yearly plan... we get it a month...based on like reading a book reading a story to them... then they...rewrite."

Another teacher mentioned the importance of support and guidance for the children when writing:

I find that it would be...a lot more guided kind of at the beginning of the year. So, I do a lot more guided work...there will be few in my class who would be able to go and write a story independently really."

Importance of teaching narrative writing

Other teachers commented on the importance of narrative writing from the perspective of providing freedom of learning, extension of personality, and the ability to tie in other aspects of literacy such as grammar:

"Oh, yes. Oh, my gosh, yes, absolutely!... Well, I think for just general composition, you know, it's giving them the freedom to think about their own ideas, you've given them a clear structure of what needs to go into the beginning, the middle and the end. And then you can link in all your...other things. So, your similes, your metaphors, using commas and lists your...speech and subsequent paragraphs."

"I do yes...Because it can be an extension of their personality too."

Teacher enjoyment of teaching narrative writing

The teachers all said yes (with one also noting potential caveats to enjoyment) when asked if they enjoy teaching narrative (thus, a consistent opinion).

One teacher commented that they like teaching narrative because pupils can use their imagination.

"Because you can use your imaginations."

Another teacher enjoyed teaching narrative because of the ability to link it to other lesson areas such as drama and ICT:

"Because I can link it to...drama and... they can close their eyes and go and hide in a dark space. And we can think about our senses. And... also then would even carry on into our World War two sort of topic and...have the sirens going and dress them up as evacuee's and all...So...I just really love it. And then I love linking it with the ICT...too. So...they made like little backdrops. And they made up their own stories for that for the story sort of planning for the animations, and then they just use Lego...characters and...told the story that way...I do really enjoy it."

Perceived difficulties of narrative writing for children

As mentioned, there are some caveats in respect to enjoyment of teaching narrative writing. A consistent theme that emerged is that approaches to narrative writing depend largely on class needs and size. Larger class size, and more complex needs appear to make narrative writing lessons more difficult.

"I do...and I don't. I would do it religiously you know, but sometimes it can be especially if you have a class of 27, 28 I would deliberately timetable it in I have a classroom assistant Monday to Wednesday, just to lunchtime Thursday and Friday, I would deliberately do it at a time where I have an assistant."

"...because this class... there's a lot more needs and ... we're ... massive."

"... so many different levels of ability. Very hard."

One teacher appeared to have a stronger class compared with the other teachers in respect to narrative writing:

"I think it's one of the easiest, because...they've got a lot more freedom. And it's a bit more exciting than well recount yes, you can make it as you know, we look at Diary of the Wimpy Kid and...we look at wee film clips, and...getting to recount the day in the eyes as if there's somebody else and but with narrative, you can take that so much further, because it's their own...with their own imagination."

However, the teachers also expanded upon the challenge for some pupils in respect to getting their imagination going, formulating ideas, and developing settings and characters, and requiring help to do so:

"It can be for some kids, because getting them to maybe start with a blank page...they kind of find it a bit daunting...some of them would sit and write you know

and some of them might need a lot of help. So, it can be hard for them yeah...to get [imagination] started like yeah."

"I think it probably is yeah...for the more able ones, they can let their imagination run away with them. But I can see ones here, where you'd have to spoon feed them, you would have to give them the bare bones...some of them, I think, would really struggle."

"Settings probably settings...I would also do characters and settings very much in isolation, because I'm conscious that if they're left to their own devices, that those aspects could be a little bit thin on the ground if they were writing their own story, but there's time enough for that to be developed into...P5."

One teacher noted the need for shorter lessons with achievable goals, depending on the needs of pupils:

"Yeah...I have a wee boy in the class...its keeping...their interest or you've lost them. And has to be even on my evaluation, it has to be very short, you know, achievable goals. They can't really cope with longer term things, which I thought they would have at the start of the year...it has to be really watered down for them...Everything they do is practical before they can nearly move on to do it. On paper."

In addition, spelling was an issue raised by the teachers, especially within large class sizes, with diverse needs, and limited help, requiring use of small groups as one possible approach. Although, limitations also exist with small groups:

"[Sighs] I think for some of them, it's the frustration of them not being able to get everything down. Yes, they're excited. But I think particularly in P4, if they're hitting...that brick wall and I just I can't...have the spelling. Yeah, and, it can, it can be really frustrating for them.

"Spelling...I had a class of 28 and limited help...our special needs coordinator would have taken a wee group out even to try and timetable that they're given a good lot of time in a smaller group setting. Like the way you did is just perfect...trying to do that as a class it is just you know, whereas if [staff name] could take a weak group the classroom assistant or [staff name] or whoever took the...smaller the group, the better you know...or else get the other ones to do something, but then they still demand your attention...even if it was colouring in, it's still when you're trying to do it in a smaller group."

Pupil choice in narrative writing

There was a mixed discussion of pupil choice in narrative writing. However, it appeared, generally, that most of the teachers maintained a level of control over pupil writing, usually due to the differing and complex needs of pupils, and difficulty of formulating ideas and using their imagination (again a persistent theme):

"I find that they find that really hard...Because I'd kind of go oh, there's just too much options. It's kind of a barrier into starting the story. Whereas if you give them even a kind of a start, like, one image or one topic or theme, then they can."

Another teacher mentioned the issue around class size and the difficulty of giving pupils choice in large class. This particular teacher also discussed encouraging pupils to get outside as a means to inspire ideas for writing stories, and enabling pupils to apply their imagination, recreating their experiences:

"There's a lot of them, especially in here...that's why I push them to get outside. Because then they can let their imaginations run wild when they're outside...through their exploring and investigating and then once they have actually done it they can put it more onto paper...they can re-enact it then...you know, rewrite sports day. Having seen it, they can then pick out their own wee ideas."

One of the teachers discussed use of pupil notebooks to encourage them to write their own stories:

"Oh, yes, yeah, oh, there would be time for that I like to sort of about halfway through P4 introduce like a free writing book. So, they can draw pictures and write about anything...they want to and then that sort of features in a weekly...sometimes daily...they might get them out for a short...time. I would give them the chance, just write about anything that you that you want. And then it would be a mixture, it would be linked to our topic, and then there would also be free because I like them to investigate adventure or sci-fi and all those sorts of different sub sections, you know?"

Another teacher also discussed how some pupils actively engage with private notebooks, providing the students with some control over their writing, and flexibility with respect to pupil needs and interests. However, some pupils still do not engage:

"So they all have their own notebook. And I told them that it's private...they can at any point take that there and write their own stories. And so, some of them would write stories, write lists or something like that. But then they know I don't look at it if they don't want me to look at it."

"They do...not them all, but some of them do...especially if they're proud of or if they started writing chapters or a book or whatever there is...and...then if you got the likes of some other kids like [pupil name] ...he doesn't want to do that...so be nearly trying to get him to do it, whereas some of them just want to do it anyway. So, I suppose this way is great for them."

Even though many teachers have control over their pupils writing, they do acknowledge the need to give pupils more choice which was a regular theme:

"Yeah...I think I probably should do that more that'd be kinda I'd be wary of it because I'm thinking they'll all be scratching their heads...they were not used to doing it, that way...even when maybe some of the brighter ones will go right? Or what do we do? Because normally I'm good at following what the teacher was telling me to do. So, when I've just nothing there oh and then some of them might just go I'm gonna do this like."

"I probably do dictate it quite a bit...what have you enjoyed about forest schools, what we've been doing, you know, but I probably don't give enough freedom."

Some of these teachers who identify a need for more pupil choice, focused on the need to enable pupils to write more about current themes, and their interests, as it inspires them more:

"That's something for me to think about in the future, you know, because I would be very...controlled, I would be...today we're gonna write about Paddington and if you have no interest in Paddington whatsoever...you've had it. Whereas if I said to the boys write your favourite sport, but it has to be skipping they'd have a fit. But if they got to write about football, they would be all you know...something that interests them would inspire them more"

"They've all got their own interests and things...I think...all of them might be interested in, in Star Wars, or they've got a bit of a Pokémon theme, whereas the girls, I'm just talking about this class this year...quite likes a wee...adventure. And then you've got maybe some of the other ones that quite like, a bit of a haunted mystery type thing. Yeah, they've all got their...different things that they have that they like."

Use of resources in narrative writing

There was a theme in that most teachers discussed similar resources such as use of more traditional resources like pictures, whiteboards, film, or a newspaper or book/story to prompt idea generation. However, there was little use of interactive ICT devices or apps:

"I suppose you might use pictures...when they open the whiteboards...or we might...a story or...what we are doing already or what would happen next?"

"And yes, for film...I love looking at wee...snippets of film."

"...mostly books."

"...newspaper article."

One teacher interestingly discussed use of online websites to help inspire idea generation including through use of images:

"Yeah, well, there's online websites, I can't remember the name of it now. But...last year, I did that a good bit, we would do writing and they would...put on...a picture of like mountains or something like that and they would have to...using descriptive words, looking at the visual image and putting that into the story if that makes sense?"

Another teacher noted use of Chromebooks for helping with spelling, and iPads:

"But then that's why we use the text-to-text help and things on the Chromebooks and all the accessibility features on the on the iPads. So, they can just go and find a quiet corner and get everything down."

Usefulness of interactive apps such Amazon Alexa's Magic Door in helping children's narrative writing

There was consensus that all teachers thought that interactive apps such as Alexa and the Magic Door app would help children's narrative writing. The teachers liked the use of storymaps as a reminder tool (another persistent theme), as well as how the app encouraged choice, group discussions and decision-making, but still resulted in unique outcomes:

"I think it looks great actually loved the idea of how they...listened...they'd drawn a picture it's like little map for themselves and its reminders... I think that's a great idea... it's nice as well that they got to discuss and decide make decisions together and then see, okay, but then I love that they you know none of them are the same."

"Yeah...I do. I think the working memory of a lot of our children seems to be very poor. And I think it would be good if they had something that they could write down or make notes so that they've got something. So, it can be paused enough that it becomes part of the tangible planning rather, but equally, I suppose it's an enjoyable activity."

"But the idea behind it is about giving children choices and also giving them a little bit of a sort of a structure... They are making their choices... as you say giving them options, but they felt they were in control, you know, rather than me dictating to them."

When asked about the effectiveness of apps in helping all children, there was consensus that it would help all children, especially with confidence, and giving freedom in particular, to more able pupils, as well as providing storymaps to help pupils whose writing is weaker:

"I think it would be helpful for all of them. But the more able saying that they can have the freedom to go further." "I think I think all children would find that helpful. I think that the weaker children definitely will benefit from especially from having like a map and having something to refer back to so they're not lost in the story. And they're kind of going I can't remember what we did. Whereas they have a little look back at their map. That's great for them."

"I think it'd be great opportunity for them as well for their confidence."

"Yeah, I think it would yeah...if it was going to get them interested in you know to a good trigger to get them engaged and all that you know and the prompts whatever, it's going to give them...problems along the way, as well."

Challenges of using apps in the classroom

Class size and control was again discussed by the teachers and was a persistent challenge in respect to using apps. Some specific issues were focused on interacting with Alexa such as asking questions, random questions, everyone asking for spelling of words, and pupil safety:

"There might be...one or two in particular there would be telling Alexa everything, you know, so we might disturb the people and disturb me."

"Well like there's always going to be challenges when I'm doing whole class lessons anyway you know what I mean? no matter what we're doing, there's going to be someone who might not be totally engaged in the task... like they all want to do well... If someone's asking questions, and everyone's asking for spellings and things like that it might be a bit of a start and stop."

"Some might be naughty enough to say, Alexa, what does...mean... Like you know, so I would be very, you know, again, it depends on your class, but even the good ones have their moments. So, I'd be that will be the only thing the safety aspect."

Working in groups was mentioned, as a potential solution for employing apps in the classroom/school, to help reduce class size and maintain control:

"I don't know. I don't know how well it would work as a whole class, I'd be willing to I'd try it and see, but I wonder whether they would get more out of it in a smaller group. Because you're saying that obviously, if there's loads of people that are

calling, you know, out that might, you know, confused, but equally it might be nice to try it with a whole class and even have them in pairs or something, then then that would create conversation, but they have their own planning map. And then to compare that we all went on the same journey. But what did we come up with afterwards? Might be quite nice."

Another challenge discussed, was the potential for pupils to get bored with apps and needing to switch lessons up. Boredom has already been mentioned by teachers as a problem when it comes to writing:

"What I think...that's the whole thing about the Magic Door it's a great idea but if you're doing it every day, they'd obviously be bored. So, it's like everything, you have to switch it up and you have to keep...reintroducing taking things back, or else they're just gonna get fed up."

Enjoyment of using an interactive app and the associated choice

There was also consensus in respect to the potential for pupil enjoyment in using interactive apps and having more choice in their writing as a result. All teachers said yes, with optimism:

"Yeah, definitely. Definitely."

"Yeah, I think of course they would yeah because then it's not just...they're driving it as well you know?"

"I think they would... Yeah, yeah, definitely. 100%."

"I think that it just creates that real sense of excitement of, you know, gosh, what is going to come next in that area? Yes, I've chosen it. But I don't know what's going to be, you know, in behind the behind the mountain or, you know, up the tree or wherever."

Changing the writing curriculum and further developing the use of technology

There was consensus amongst the teachers, in that the writing curriculum could be changed to incorporate the use of technology, especially since technology can capture pupil interest: "100% yeah, but in its place, you know, again, I will be very down on the safety aspect...our literacy coordinator...he would be very, you know, for your green screen and doing lots of different things. And that's what he the ICT coordinator as well is trying to promote as well...it can be a really great tool like it can without a doubt... My class, especially this class this year...you would captivate them quicker. If I said, right, we're just going to go on the interactive whiteboard... rather than me just write...So, it just engages them it just catches them...then you're half the battle."

Some of the teachers even highlighted the fact that the current curriculum was conceived/updated at a different time, where technology was not as prominent in society, and that the technological landscape is changing quickly:

"I suppose so yeah, I suppose it could because technology is changing so quickly now that like, sure. When the most recent curriculum was updated, maybe this idea wasn't even conceived let alone developed. So yeah, of course, because things were changing so quickly."

"Well, I think we have to, that's the way life is for the children these days and I think that's going to motivate them and anything like that, that motivates them...Whereas if we go on to an app... then they're straightway more engaged. That's what they're used to. They're in their comfort zone straightaway, once they're on that that app. I think that they've more confidence."

The need for additional resources on technology was discussed by one of the teachers:

"Yeah, I definitely think that there could be a lot of resources on technology that we could use that would to, like, help different types of learners rather than just the straightforward you know what I mean?"

Chapter 6: Key Findings

This chapter presents the key findings from the study drawing from the children's focus groups and the teacher interviews. The chapter concludes by identifying a small number of recommendations as a way forward.

Children's perspectives

Experience of writing stories

Prior to their experience of the Amazon Alexa Magic Door app, the pupils across the focus groups were writing about a wide range of topics, as largely set by their teachers.

The pupils across the focus groups conveyed a mixed response in respect to difficulty of writing stories, prior to using Alexa's Magic Door app, and most pupils were unsure about how writing stories made them feel. Some pupils were also acutely aware of the difficulties faced by, or the feelings, of their fellow classmates. There was again, a mixed response in respect to enjoyment of writing stories with their teacher, although most pupils discussed enjoyment of writing stories in general. Most pupils also acknowledged the importance of learning to write stories, although, not as much in school, as there was some negativity towards writing in school. The pupils who enjoyed writing noted how they enjoy writing about topics that interest them, in creative writing-related tasks such as drawing, and the freedom to write and pick their own topics. According to Wyse (2018) one important aspect of writing with children that has not been subject to robust experimental research is whether pupil choice, and hence ownership of their writing over time, is beneficial compared to writing tasks which are planned and controlled by teachers. However, there have been small scale studies which have identified the value that children place on having choice and ownership of writing (Dunn and Sweeney, 2018; Taylor and Clark, 2021) and it is argued 'it is important, therefore, that teachers find spaces to allow children to write freely and have the opportunity to understand more about the texts children are encountering outside of school' (Taylor and Clark, 2021, p22).

There was almost a 50-50 split in the number of pupils who are writing at home. The pupils who write at home, in their own time, were found to be writing about their interests, as would be expected, given the aforementioned link with enjoyment of writing. The children

in this study reported higher levels of enjoyment of writing than those in the annual survey carried out by the National Literacy Trust (Clark et al., 2023) where only 35% said they enjoyed writing in their free time. Interestingly, there also appeared to be a trend where writing at home was either linked with lowering difficulty, or pupils who find writing easy and enjoyable, were more likely to write at home. At home, most pupils rely on their mother for help, including with spelling and reassurance, although, some discussed how they write at home by themselves. The role that parents play in supporting children to write at home is important and family members are often seen as knowledgeable figures in their learning and as literacy motivators (Kendrick and McKay, 2004). The findings from this study support those of Baroutsis et al. (2019) who argue that children value this parental interaction and identify these writing relationships as having a high degree of importance.

Many of the pupils as discussed, stated how they have lots of ideas when writing stories, and that they enjoy getting to use their imagination, to make up their own stories. The most common, and pupil-reported 'best' sources of help for generating ideas for writing included 'children's TV programmes and films', followed by 'imagination', 'children's books', 'teacher giving ideas', and 'talking to friends about ideas' respectively. This chimes with research by Parry and Taylor (2021) who report that children's repertoire of reading informs their writing and this repertoire increasingly includes popular culture texts including film and television as well as more traditional texts.

Using the Magic Door app

Children enjoyed using the Magic Door app with 76.2% of pupils reporting that this approach to writing made them happy. 95.2% of pupils thought that this approach made writing more fun. Most pupils (85.7%) thought that this approach made writing easier and was more enjoyable (95.2%), with 81% of pupils responding that the Magic Door app helped them with ideas for writing. Thus, the pupils reacted positively to using the Magic Door app, with many liking the new approach to writing, the ability to choose, and the fun, interactive, and engaging and surprising nature of the Magic Door app. Previous research studies have shown that digital technology has the capacity to provide fun and enjoyment in learning (Dunn and Sweeney, 2018) and to playfully explore literacy learning as children draw on all their social and cultural resources (Parry and Taylor, 2021). Nevertheless, the pupils conveyed a mixed response in respect to difficulty of using the Magic Door app. Only 57.5%

of pupils said that they would like to use the app in class, and 57.1% said that they would like to use the app at home, indicating a mixed response and potential issues with their experience. Yelland (2018) posited that new technologies should complement and build on other resources and it is important to note in this study that not all children enjoy using technology in learning and it is only one approach in a rich literacy learning environment.

Prior to using Alexa and the Magic Door app, only 52.2% of pupils favourited writing lessons (the lowest) out of 7 subject-based lessons. In contrast, following use of the Magic Door app, 81% of pupils favourited a lesson involving writing using the Magic Door app (3rd highest), Therefore, there appears to have been a notable change in perspective in respect to writing with the use of this interactive app.

Challenges of writing stories

Those pupils who originally found writing more difficult, and less enjoyable, conveyed issues such as that writing takes too long and is boring, and that it hurts their hands. Spelling and grammar were a persistent theme, with several pupils conveying difficulty with spelling when writing stories. There appeared to be a link between lack of enjoyment, and difficulty with spelling and grammar, which was made worse by having to multi-task, including for example, drawing and writing, longer writing, and having to spell words. In such cases, pupils conveyed confusion and tiredness. Clearly, the children in this study had a strong focus on the technicalities of writing and this agrees with Lambirth (2016) who reported from his research that children view writing as a technical exercise with an emphasis on accuracy and correctness. He argues that this view suggests children perceive writing as a compliance discourse where there is explicit learning about skills and rules rather than a celebration of the creative content.

Most pupils suggested a lack of using iPads, tablets, or similar technologies such as Alexa for writing a story at school, or at home. One focus group had pupils who were more likely to have used such technologies compared with the others. The pupils who did use these technologies conveyed enjoyment due to using something different to traditional writing approaches, and because they were more interactive, and made their writing easier. This echoes previous research by Flewitt et al. (2015) who reported increased enjoyment, motivation and creativity through the use of technology. However, researchers urge caution

that technology is not simply used as a 'flamboyancy aid where schools can simply show off eye-catching innovation (Clarke and Abbott, 2016). Though, some pupils mentioned technical issues such as loss of power, turning off in the middle of something, and the time it takes to turn them back on. Therefore, even though these technologies are useful, benefits need to be weighed up against potential usage and reliability issues in implementation within a classroom, or for teaching and learning activities.

Likewise, having used the Magic Door app, some pupils noted annoyance with the approach. For example, pupils highlighted confusion with the app, and that the app sometimes would not follow the choices that the children made. Some pupils also conveyed how it involved a lot of interacting with the app, a lot of writing, and that they struggled with spelling, requiring them to ask for help. Thus, the implementation of the Magic Door app appeared to continue some aforementioned issues for some pupils.

Teachers' perspectives

Experience of teaching narrative writing in the classroom

The teachers interviewed, all conveyed variations of how they implement the teaching of writing in class, and school, and the different topics that they use. These topics appear to be largely influenced by, for example, the teacher's interest, and time of the year, such as holidays, indicating high levels of teacher-controlled topics. Some of the teachers noted use of poetry and recounting, as opposed to creative narratives. However, the teachers interviewed all said that they enjoy narrative writing and did in fact acknowledge its general importance in terms of freedom of learning, use of imagination, extension of personality, and the ability to tie in other aspects of literacy such as grammar. According to Myhill et al. (2013), the place of grammar in the teaching of writing has long been contested but they argue for linking the teaching of grammar within meaningful writing for children. The teachers in this study appear to agree with this approach in their teaching of grammar within the curriculum.

The teachers interviewed, all appeared to utilise similar resources, including whiteboards, images, film, newspapers, and books, with little use of interactive ICT devices or apps. However, there was some move towards use of ICT, with use of online websites, and one teacher noted use of Chromebooks and iPads for helping with spelling and writing (one focus group above, did appear to be using more technology than their peers in the other focus groups).

Challenges of writing stories

There were some issues raised by the teachers in respect to narrative writing. The major themes that emerged from the interviews included diverse class needs and size, with larger and more diverse classes, with complex needs, making narrative writing much more difficult to deliver. In particular, many pupils struggle with formulating story ideas, and getting their imagination going, including developing settings and characters. In addition, spelling was a persistent issue, especially with large class sizes, and limited help. The teachers conveyed the need for small groups (to reduce the extent of some class-size issues), and shorter lessons with achievable goals, in the delivery of narrative writing lessons, which would depend on range of pupil ability and complexity of needs. The issues of class sizes, greater numbers of SEN children and limited help from classroom assistants are part of the wider concerns of the current debate regarding severe budget cuts facing education. Fitzpatrick et al. (2023) highlight the reduced funding for SEN support in schools and refer to a system of SEN provision in Northern Ireland which has been in crisis long before the current funding cuts. It is also argued that the cuts will widen the disadvantage attainment gap and disadvantage children from lower socioeconomic areas the most. It is clear that the teachers in this study are already aware of the impact of these challenges in relation to effective teaching of narrative writing.

As discussed, most of the teachers appeared to maintain a level of control and direction over writing topics, usually due to the aforementioned class size and complex needs, and idea formulation challenges. Although, the teachers appear to be making strides in helping pupils develop such skills through the use of notebooks to encourage pupils to take some control over their writing, write their own stories about their own interests, and consequently, catering to different needs and abilities. However, one teacher noted how some pupils still just fail to engage. All of the teachers did reflect on and acknowledge the need to give pupils more choice, especially in respect to their own interests to motivate, inspire, and more effectively fuel their imagination, and ultimately, engage them in more successful narrative writing. In a recent research project with primary teachers, focusing on teachers as writers, Myhill et al. (2023) report how teachers highlighted the importance of 'being an author', and using notebooks to draw on their own interests and experiences for writing. They also note how this contrasts markedly with children's experiences of writing in school where more explicit direction by teachers prevails. It was interesting that the teachers in this study were making tentative steps to allow children the experiences of drawing on their own ideas and interests in a move to 'being an author'.

Use of Amazon Alexa and the Magic Door app in narrative writing

The teachers who were interviewed all agreed that Alexa and the Magic Door app would help children's narrative writing, including the use of story maps as a reminder tool, to encourage choice, group discussions, and decision-making. Furthermore, all the teachers agreed that the children would find it enjoyable, and that the app would help children of all abilities, especially with choice in their writing, confidence, giving freedom to more able pupils, and helping pupils whose writing is weaker.

However, the teachers raised potential challenges of using Alexa and the app, especially in respect to class size, and pupil interaction with the app, for example, asking questions, competition for help with spelling, and pupil safety. As was mentioned above, the teachers also discussed use of small groups to help mitigate these challenges and helping to monitor and maintain control within the lesson. The potential for pupils to become bored with Alexa and the Magic Door app was discussed, highlighting the need to vary lesson approaches. UNESCO (2018) report how effective integration of ICT in schools and classrooms can transform pedagogy and empower students and they also state 'successful integration of ICT into the learning environment will depend on teachers' ability to structure learning in new ways, and merge technology appropriately with pedagogy' (p 21). Similarly, in a recent study on early childhood teachers' digital competences, Madsen et al. (2023) reported that teachers' attitudes to the use of digital technology with children are mostly affected by their previous experience of digital technology, the availability of the technology, opportunities for professional development and their own beliefs about digital technology. Therefore, teachers are the lynchpin to effective use of digital technology in the classroom. The teachers in this study were aware of the opportunities and challenges in using the Magic Door app but the potential use of interactive apps to support children's writing will be impacted by teacher attitudes and opportunities for professional development.

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Perspectives on the writing curriculum

All the teachers discussed that the writing curriculum could be changed to incorporate further use of technology, as technology can capture pupil interest. The teachers also acknowledged that the curriculum was last updated at a different time, when technology was not necessarily as prominent in society, and that the technological landscape is changing quickly. It was highlighted that the children are familiar with a lot of the technologies that could be incorporated. However, one teacher did convey a need for a lot more resources on technology, especially in respect to learner types. The curricula in both Northern Ireland and the Republic of Ireland have extensive reference to the use of ICT and digital technology in the classroom and related teacher resources (CCEA, 2023b; NCCA, n.d). Therefore, perhaps the emphasis needs to be on more effective professional development and training for teachers to enable them to develop their knowledge, skills, and competencies in the use of digital technology in the classroom (Menşan and Anagün, 2022).

Conclusion

This qualitative study set out to examine the views of children and their teachers, in areas of social disadvantage, on their enjoyment of and engagement in writing both inside and outside the classroom and on the potential of an interactive app in assisting them with their narrative writing. Four schools across Northern Ireland and the Republic of Ireland participated in this study.

The children in this study appeared to enjoy writing more than is reported in other studies with many children choosing to write at home. However, children were also vocal about the many challenges of writing. Whilst writing in school is teacher directed with less opportunity for children's own choices about writing, at home, children write about what interests them. The use of the interactive app, the Magic Door, made writing more enjoyable for children and supported their ideas for writing. They particularly liked the interactivity, the fun approach and the opportunities for choice. Capitalising on more creative, enjoyable experiences in writing may be a valuable way of developing children's writing skills further and encouraging more engagement in writing at a time when children's writing is seen as 'in crisis'.

Similarly, the teachers in the study recognised the challenges for children in writing and also the challenges that teachers faced in teaching writing lessons. They acknowledged the importance of choice and creativity in children's writing despite the pressures of teaching a variety of genres that dominates a more teacher-directed approach with little room for children's choices. They also recognised the opportunities that interactive apps could provide for choice and confidence in writing for children of all abilities and further professional development in the rapidly changing domain of the effective use of digital tools in the primary classroom is pivotal.

Therefore, interactive apps have the potential to support children in making choices in narrative writing, providing an enjoyable approach and giving children confidence in their writing. They are a tool that may be added to a teacher's pedagogic repertoire in the aim of providing a rich, meaningful approach to developing children's writing skills. This use of interactive apps may be a way of injecting choice, creativity and fun into an activity that is seen as challenging by both children and teachers alike.

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InAN: Children's Focus Group One

- 1. Do you enjoy writing stories in class with your teacher?
 - Why?
 - What do you like about writing stories?
 - What do you not like about writing stories?
- 2. Tell me about some of the things you have been writing about recently.
- 3. What has been your favourite story to write about recently?
- 4. Do you ever use tablets/iPads when writing stories?
 - What apps do you use?
 - What do you like about using these apps?
 - What do you not like about using the apps?
- 5. Do you ever write stories at home?
 - Does anyone help you do this at home?
 - Do you ever use your tablets/iPad to write stories at home?
- 6. Do you think writing stories is easy or hard?
- 7. I have put 3 emojis in your envelope. A happy face, a not sure face and a sad face (show them to children). I want you to show me the emoji that you feel when you are writing stories. (Remind them this is their view and everyone's ideas about writing will be different).
- 8. I have some sentences in this envelope about how you might feel when writing stories. I want you to look at these and sort them under true and false and put them on the table in front of you. You can chat to your friend if you want to. There are no right and wrong answers. This is just what you think (take a photo of each child's sorted sentences).

- 9. When you write stories you have to think up lots of ideas for different characters and what happens in the stories. What helps you come up with ideas/where do you get your ideas from?
- 10. In this envelope, I have some different ways that you might get help with ideas for your stories. Let's look at them together. (Get the children to open the envelope and look at the ideas together). I want you to put these in order from 'This is the best help for ideas for stories' to 'This is the least help with ideas for stories' (Get the children to rank these in order individually and then photograph each child's ordering).
- 11. Finally, in my last envelope, I have pictures of some different lessons (show pictures together art, PE, maths, science, reading, music, writing). Ask the children to put them in order from their favourite lessons to their least favourite lessons. (Children have one envelope each and do this on their own take a photo).

Boys and girls, thank you very much for helping me with my questions today

InAN: Children's Focus Group Two

- 1. Did you enjoy using the Magic Door to write your fairy story? Why?
- 2. What did you like best about writing your Magic Door fairy story?
- 3. Was there anything you did not like about writing your Magic Door fairy story?
- 4. Did you think writing your Magic Door story was easy or hard?
- 5. I have put 3 emojis in your envelope. A happy face, a not sure face and a sad face (show them to children). I want you to show me the emoji that you felt when you are writing your Magic Door fairy story. (Remind them this is their view and everyone's ideas about writing will be different).
- 6. You were able to choose different characters and different places to go in your Magic Door fairy story. Did you enjoy being able to choose these things? Do you think children should be able to choose more when they are writing stories? Why?
- 7. The Magic Door app had lots of ideas for your fairy story. Did these ideas help you when you were writing your fairy story? How?
- 8. I have some sentences in this envelope about using the Magic Door app when writing stories and I want you to look at these and sort them under true and false and put them on the table in front of you. You can chat to your friend if you want to. There are no right and wrong answers. This is just what you think (take a photo of each child's sorted sentences).
- 9. Finally, in my last envelope, I have pictures of some different lessons (show pictures together art, PE, maths, science, reading, music, writing using the Magic Door app you can remind them we did something similar in the first focus group). Ask the children to put them in order from their favourite lessons to their least favourite lessons. (Children have one envelope each and do this on their own take a photo).

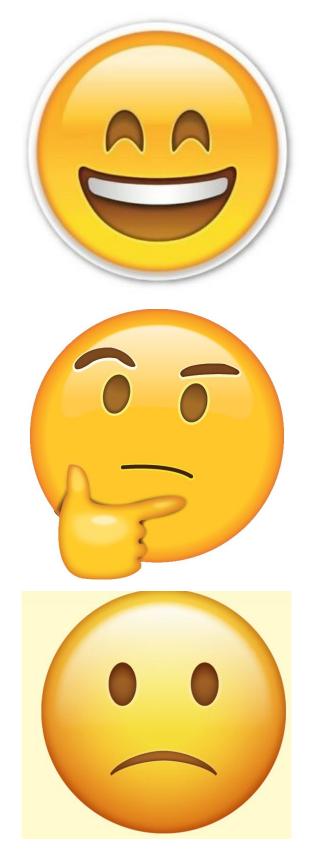
Boys and girls, thank you very much for helping me with my questions today

InAN: Teacher interview

	Main question:	Probing questions:
1.	Do you teach narrative writing in your class?	 How many times a term would you teach it? Would you teach it in each term in the year? Does it feature in your planning for literacy?
2.	Have you taught narrative writing recently in your class?	 What was the topic for the narrative writing? How is the topic selected? Do children have a voice in the selection? Would you base the writing around the current theme/topic in the class at that time?
3.	Do you enjoy teaching narrative writing?	 Why/why not? What are the challenges in teaching it? What do you enjoy about it? What do you not enjoy about it?
4.	Do you think narrative writing is an important genre for children to write in?	Why?/Why not?
5.	Do you think this is an easy or hard genre for children to write in?	 What are the challenges for children in writing in this genre? What is easy about it? What is hard about it?
6.	What sort of resources would you use to engage the children's ideas for them to use in their narrative writing?	 Why do you think it is important to use these resources in your narrative writing lessons? How do these resources help with developing children's imaginative ideas?
7.	Would you find that some children struggle with ideas for narrative writing?	 Why do you think that some children struggle? What aspects do they struggle with – characters, settings, events? Which children tend to struggle?
8.	What are the barriers for children in completing a piece of narrative writing?	What challenges do you encounter in teaching narrative writing?
9.	Do you ever give children choice in their narrative writing? E.g. choice in the characters, events, setting for their narrative stories?	 Why?/ Why not? Do you think that giving children a choice in this way is helpful for their writing?
Take time to show the Magic Door app and how it works. Explain what you did with th children in the lessons.		
	Do you think that an interactive app like this can be useful in helping children with narrative writing?	 How do you think it helps children? Which children would find it most helpful? Any drawbacks to interactive apps?
11.	What do think might be the challenges of using interactive apps in the classroom?	 Organisational/class management challenges? Technical challenges? Other challenges?

12. Do you think children would enjoy using an interactive app that gives them choices in a story?	• Why do think using this interactive app would be an enjoyable experience for children while writing in this genre?
13. Do you think that our writing curriculum needs to be updated regarding the use of technology?	In what ways?

Pictures of emojis to sort for feelings about writing:



Sentences to sort about writing:

I love writing stories.

I think that writing stories is hard.

It is important to learn to write stories.

I enjoy it when the teacher gets us to write stories.

I write stories at home sometimes.

I would like to write more stories in school.

I don't like writing stories.

I have lots of ideas when I am writing stories.

Pictures to sort for ideas for writing:



Children's books



Children's TV programmes and films



Talking to my friends about ideas



My teacher gives me ideas



My own imagination

Sentences to sort about the Magic Door app:

I enjoyed using the Magic Door app to write stories.

I think that the Magic Door app made writing stories more fun.

I do not want to use the Magic Door app again.

I would like to use the Magic Door app in my class to write stories.

I think that the Magic Door app made writing stories easier.

I would like to use the Magic Door app to write stories at home sometimes.

The Magic Door app helped me with my ideas for writing.

I have lots of ideas when I am writing stories and I do not need the Magic Door to help me.

Information on the Amazon Alexa Magic Door app

Description

The Magic Door is an Alexa-powered interactive adventure game with original stories. You can tell Alexa what choices to make as you explore a magical land with various regions, including a forest, sea, garden and castle. You will collect hidden items, solve riddles, and help magical creatures. By choosing the current adventures in the following order, you can be sure to explore the entire land beyond The Magic Door:

- 1. Take the Garden Path in the Mountains to help the Princess find her crown.
- 2. Talk to the Rabbit in the Garden and find his eggs hidden beyond the Gate.
- 3. Take the Forest Path in the Mountains to help the Gnome find the key to his home.
- 4. Take the boat across the Sea to the Tropical Island to help a family of monkeys.

5. Follow the fiddle along the Sea to a fortune teller who will direct you to a Haunted Lighthouse.

- 6. Travel up the Bluff along the Sea to gather items for the Gnome with the Flute.
- 7. Explore various lands to gather potion ingredients to grow a Fern to the Clouds.
- 8. Travel to the Dark Forest and search the Witch's Mansion for the Wise Wizard.
- 9. Journey past the Garden Gate to the Holiday Party in the Princess' Castle.
- 10. Search for the Wizard in his Tower, repair his broken mirror, and collect his Wand.
- 11. Finally meet the Wise Wizard in the Ancient Temple and help him turn back time.

https://www.amazon.co.uk/The-Magic-Door-LLC/dp/B01BMUU6JQ



The Magic Door by The Magic Door, LLC Rated: Guidance Suggested ★★★★☆ 14,579 Free to Enable

"Alexa, open the magic door"







