

Language and Literacy in the Digital Age

Throughout history, storytelling has been one of the most widely used methods for passing knowledge from one generation to the next (Maureen, Meij & Jong, 2022). Storytelling is an exciting yet relaxing time for children of any age. However, there are a wealth of benefits that go beyond just entertainment. Strickland, et al (2004) explains that the development of early literacy skills is pivotal in the education of children. Sintonen, Kumpulainen and Vartiainen (2018) further this by stating while story telling is enjoyable and calming for children, it also has the ability to convey narrative structures. For example, elements such as setting, theme, characters, plot and conflict. Which together offer a model for language, frameworks for learning and an avenue to enhance imagination, all of which help develop children's literacy. There is a growing interest among children in the use of digitalised stories. Elements such as vocal expression, soundtracks, careful pacing and conciseness can be crafted to personalise how the story is conveyed (Robin, 2016). Robin (2016) continues, that digital storytelling has a key aspect of making learning relevant to today's children.

According to O'Byrne et al., (2018) simply reading or listening to a story encourages parts of our brain to actively follow a timeline of events, making it a more personal experience and therefor guide the children to become active participants. Other research confirms that storytelling activates different regions of the brain that are linked to cognitive control (Lehne et al., 2015), emotions (Hsu et al., 2015) and empathy (Brink et al., 2011). The use of interactive visuals through digitalised storytelling can be used as a powerful tool as it helps engage their senses (Catalano, 2021) and help foster participation (readingcom, 2024). The use of interactive visuals, like simulations or animations encourages children to stay curious, which can then lead to a deeper learning experience (Ciampa, 2015). Children who are visual learners can benefit from the use of images and animations which help them understand more complex ideas (Berney & Betrancourt, 2016). Using a video recording of *The Hungry Caterpillar* to tell the story helps maintain children's engagement by providing constant movement and visual stimuli to catch their attention. The dynamic visuals make it easier for young viewers to follow along, enhancing their overall interest and involvement in the story (Insa, 2023). In contrast, using only the book *The Day the Crayons Quit* may limit the visual experience for children, as they might struggle to see the illustrations as clearly as in a digital format (Furenes, et al., 2021). Without engaging with clear visuals, children may become less interested and struggle to maintain focus, leading to a decrease in overall engagement with the story. Digital storytelling, with its vibrant colours and animations, can therefore be a more effective way to capture and sustain

attention, providing a richer storytelling experience that better holds young audiences' interest.

In Corbett's approach, the use of physical movement is a powerful story telling tool. Movement when reading a story adds a physical dimension, helping the story to come alive for children (Cohen, 2007). Pie Corbett's approaches are important to help enhance children's comprehension and engagement. For instance, with *The Hungry Caterpillar*, the movements and sound effects of eating the foods and rubbing of the stomach to represent hunger can help children connect on a deeper level to the story's content and emotions, allowing them to recall details at a later point and interpret meanings (Corbett & Strong, 2016). Corbett & Strong (2016) further this by explaining that pauses and questioning are essential elements to a storytelling framework that help highlight the importance of questions that help foster an interactive approach while allowing the children to process and anticipate what might happen next. When reading *The Hungry Caterpillar*, the structure of the book and the content within naturally supports the use of questions and repetition, which stated by Bruner (2001) are fundamental in helping to reinforce concepts in early childhood learning. The repetition of numbers, foods and days within the story allow questions such as "How many apples did the caterpillar eat? Let's count together" or "What do you think will happen next?" when the caterpillar builds himself a cocoon. The use of physical gestures, such as holding up fingers to count how many pieces of fruit the caterpillar eat will help to reinforce sequencing, numeracy and repetition which will then encourage children to actively participate. These questions also help to reinforce pattern recognition, counting skills and recall, that is important for children's cognitive development (Mol, et al., 2009). Additionally, repetitive movements help children to participate actively which aligns with Pie Corbett's focus on interactive and participatory storytelling techniques. In contrast, the second book *The Day the Crayson's Quit* offers fewer opportunities to questions in relation to sequences or numbers. However, the book presents emotional content, which allows a focus on questions around the character's feelings and perspectives. Children may be encouraged to practise empathy while being asked "How did the crayon feel?" or "Why does the crayon feel this way?". This practise is vital for children's emotional development as it enhances their ability to be able to identify emotions of others (Domitrovich, 2017). The use of exaggerated facial expressions in *The Hungry Caterpillar* can help amplify the caterpillar's journey for the children. For instance, the use of wide eyes and a surprised expression when revealing what the caterpillar ate next which can help engage children's curiosity and excitement (Ben, 2012). The use of these expressions help children understand how to react to the story's content and help connect emotional cues to certain events, for instance when the caterpillar has stomach ache, which in turn will help to foster empathy and excitement. In the story book *The Day the Crayons Quit*, the use of facial expressions, tone and pitch help

emphasize the crayon's emotions – sadness, anger, frustration or excitement – since each crayon has its own complaint or want. An example of this in the book is when 'blue crayon' asks to have a break because he is used too much, or when 'peach crayon' asked "why did you peel off my paper wrapping?", my tone changed to express the emotion however, it would have been helpful for the children if I made more facial expressions to help emphasise this emotion. Nevertheless, the question was asked "How do you think Peach crayon is feeling?" which would allow the learning of new vocabulary such as "embarrassment".

The use of digital books as well as paper books both offer unique challenges and advantages. Digital books tend to offer sounds, animation and interaction, this can help children to engage with each story, especially for children who learn best through hands-on learning (Kucirkova, 2019). Many digital books include the element of read-aloud functions which can help support children's listening skills and vocabulary pronunciation as well as adjustable features like font size, making reading more accessible to children who may have visual impairments or other learning difficulties (Bus, et al., 2014). While the use of a physical book does not. However, Kurcirkova (2019) states that children who learn through digital story books, lack the benefit of tactile experiences such as holding the physical book, the ability to turn pages and visually navigating the story which can contribute to their motor skills development. This tactile experience also creates a memorable connection between the child and book, which is beneficial for early literacy development. Engaging in expressive storytelling activities like reading *The Hungry Caterpillar* and *The Day the Crayons Quit* can help promote oracy, and reading and writing skills by making it an interactive and an immersive experience. It encourages children to actively listen and respond, which encourages the development of sentence structures and vocabulary (Brodin & Renblad, 2019). When children observe adults using facial expressions and gestures, children learn how expressions and body language convey meaning to the story, which is an essential part of oracy. Piaget (1936) and Erikson still influence the majority on language development in many countries (Mahmoodi-Shahreabaki, 2019). Both Piaget and Erikson highlight that children actively engage with their surroundings and progress through the developmental stages (Nortje, Ph.D, 2021). Piaget's theory suggests that cognitive development emerges through a series of stages, each building on the previous step accomplished. Piaget's (1936) Cognitive Stages of Development Theory is an ideal framework to help examine growth in children, as it emphasises the importance of environmental interactions to help reshape previously learned processes (Saracho, 2021). Alongside communication skills, this theory progresses along the same pathway as linguistic development (Vygotsky, 1962; Khazri, 2024). According to Piaget (1936) progress in childhood is done through four main stages: sensorimotor, preoperational, concrete operational and formal operational (Epelle, Ph.D & Asiegbu, Ph.D, 2022). Initially children will start to learn and understand symbols and language,

primarily in the preoperational and concrete operational stages which then helps literacy skills develop. Piaget emphasised that literacy skills evolve through hands-on experiences and experimentation and states that reading and writing skills are gained through discovery-based activities such as interactive books rather than direct instruction. For example, some children may understand the life cycle of a butterfly after reading through *The Hungry Caterpillar*, while other children might gain an understanding through exploration while observing an interactive video that depicts each stage of life cycle (The Education Hub, 2021). In contrast, Erikson's psychological theory of development consists of eight stages which focuses on social and emotional growth. Erikson states that literacy development is influenced during the stages of "Initiative vs. Guilt" (ages 3-5) and "Industry vs. Inferiority" (ages 5-12) (Palm, 2024). At these particular stages, according to Forsythe & Phil (2019) children will develop a sense of confidence and competency, which literacy skills can reinforce. Forsythe & Phil (2019) state that during the "Industry vs. Inferiority" stage, children seek validation and acceptance, meaning that achievements in literacy can contribute to a sense of pride and competence, while children who struggle with literacy can lead to feelings of inferiority. Erikson saw literacy as a means to achieve social success and self-esteem and not only as an academic skill, which in turn emphasises the emotional aspect of literacy learning. Piaget's approach suggests that literacy is biologically determined while Erikson implies that experiences and encouragement to children are crucial in literacy development (Psychology Writing, 2024).

The Welsh Government places a strong emphasis on literacy (Welsh Government, 2013) with a particular focus on integrating children's digital skills alongside traditional literacy to help prepare children for a digital world (Wellbeing of Future Generations (Wales) Act 2015). Initiatives like 'Talk Pedagogy' support practitioners and educators in helping to build students' foundation literacy skills, which are helped by promoting interactive environments. The 'Talk Pedagogy' provides students access to resources that can help stimulate conversation, thinking and enquiry (Hwb, 2022). Curriculum for Wales advocates for a balanced approach between oracy, reading and writing skills which focuses on helping children to analyse texts and develop media literacy. Alongside this, digital literacy is a key component in the Curriculum for Wales. The use of digital tools such as interactive storybooks, language apps and games support Piaget's principles of discovery-based learning allowing children to have an enjoyable learning experience at their own pace. To summarise, the Welsh Government's aim is to blend traditional and digital literacy skills. This alignment will educate children through foundational literacy skills while preparing them to thrive in a digitalised society.