

# Exploring Digital Storytelling as a Pedagogical Tool for Emergent Literacy Skills

NOYONIKA GUPTA\* AND ARUSHI SHARMA\*\*

---

## Abstract

---

*The present study investigates the effectiveness of a multi-modal intervention utilising digital storytelling and art to enhance emergent literacy skills, particularly Oral Vocabulary and Comprehension, and promotes parental engagement in the learning process among children aged 3–6 years. Positive changes were noted, attributing success to music in stories, word frequency, familiar contexts, reinforcing concepts through art, child-centric approach, and active adult-child engagement. Despite limitations in sample size and tools, the research remains relevant in the context of existing literature emphasising on the critical age of 3–6 years for developing emergent literacy skills due to advancements in cognitive representational ability and symbolic thinking during this phase. Moreover, the intervention’s potential benefits are particularly significant for children from lower socioeconomic backgrounds, where exposure to literacy-related materials and environments might be limited. The study’s implications extend far, showcasing the potential of digital storytelling and art-based pedagogies in building emergent literacy skills during the pre-primary stage.*

---

## INTRODUCTION

The preschool years are a phase of life when children emerge from toddlerhood to a new world of exploration and

learning. These foundational years are regarded to be of utmost importance in physical, social, emotional and cognitive development of an individual. As far as

---

\*Associate Projects, Nalanda Way Foundation

\*\*Senior Associate, Strategic Partnerships, Nalanda Way Foundation

cognitive development is concerned, Piaget describes these years as the pre-operational stage in his theory (Piaget, 1971). While logical reasoning abilities are still not developed, this stage is marked by significant advancements in representational activity, as reflected in language, make-believe play, drawing, understanding of symbols-real-world relations, and categorisation.

It is during this developmental phase, when advancements in linguistic and representational abilities are in the forefront, that another very important developmental task requires attention, i.e., 'emergent literacy skills'. Emergent literacy is defined as "the reading and writing behaviours of young children before they become readers and writers in the conventional sense" (Justice, 2006, p.3). This involves activities that include exposure to literacy-rich elements like listening to a story being read, exposure to printed material, scribbling or engaging in oral wordplay such as rhyming words (Connor, Morrison, and Slominski, 2006). An exposure to such experiences during early years lays the foundation for literacy and academic development in later life (Bennett, Daniel and Martin, 2002).

Within emergent literacy skills, researchers have emphasised on the importance of developing oral literacy skills during these years (Dickinson and Tabors, 2001). Given that the child develops cognitive representational abilities during this stage, it is the ideal time for working on vocabulary

skills, language acquisition and comprehension skills, as the child is developing the ability to identify meaningful relations between the words spoken and the objects in real life and acquire new connections (Kleeck, 2008).

Studies have shown that several factors influence the development of emergent literacy amongst children (Carroll, Holliman, Weir and Baroody, 2019; Gunn, Simmons and Kameenui, 1995). For instance, Guo et al., (2012) in their study suggest that physical literacy environment (book materials, literacy area and writing materials) and psychological literacy environment (instructional support) results in advancements in emergent literacy skill amongst children over the period of a year. Similarly, parental involvement has been found to be an important variable impacting the emergent literacy skills of the child (Sénéchal, Lefevre, Thomas and Daley, 1998). Researchers have suggested that emergent literacy skills are influenced positively by parental involvement in the child's learning trajectory through engaging in activities like storybook reading, sharing vocabulary words, and providing print awareness and discussing the components of print (Mullis, Mullis, Cornille, Ritchson and Sullender, Early literacy outcomes and parent involvement, 2004).

Furthermore, it is well-established that socioeconomic factors like family income and parental education level greatly influence the kind of learning environment available to a child

(Hammer and Miccio, 2006). This is particularly true in a cultural context like that of India's, where there exists a huge economic disparity between different income groups. Socioeconomic factors can play an important role in determining a child's access to learning resources like quality of schooling, books or experiences at home (like availability of private tutors). These factors influence the development of emergent literacy skills amongst children (Kalia and Reese, 2009).

The most commonly used approach to develop emergent literacy skills is through direct, didactic, academic, and skill-based instructions. This sort of an approach generates pressure to achieve good scores, and oftentimes leads to memorisation of content, without actual learning. Such pressures are observed more so amongst pre-schoolers and kindergartens hailing from low-income backgrounds (Miller and Almon, 2009). It thus, becomes important to explore and experiment with more child-centric, constructivist and play oriented teaching pedagogies for emergent literacy skills. Such an approach allows the child to immerse in the process of learning in a manner through which they learn through experiencing rather than memorising. The use of storytelling and art to work on developing emergent literacy skills amongst children is an attempt towards achieving the same.

While storytelling is usually regarded as a relaxing and entertaining activity for children, it also has the ability to communicate narrative

structures such as the context, plot structure and characters to the child. For instance, in a meta study conducted by Mello (2001), to understand the effectiveness of storytelling as a pedagogical tool, it was found out that participating in storytelling had a positive impact on the student's fluency, vocabulary acquisition, writing, and recall. She also found that storytelling served to improve self-awareness, visual imagery, and cultural knowledge.

Given the rapid advancements in technology, digital storytelling, i.e., storytelling through the medium of different media or software applications, is being widely used in educational contexts. Digital storytelling has been seen as a useful tool that encourages students to engage in discussion, participate in instruction and support comprehension of content (Kosara and Mackinlay, *Storytelling: The next step for visualisation*, 2013). It is regarded as a method through which a new theme can be introduced to the learner, building their curiosity to delve deeper into exploring the theme (Simmons, 2006). The use of multimedia elements like background music, jingles and visual representations in digital storytelling makes it interesting and engaging for children (Robin, 2006). Additionally, the advantage of digital stories is that the instructor can play it as many times the child wants to listen to it, reinforcing the content being taught, as repetition is an important technique as far as oral literacy is concerned (Kırkgöz, 2018).

Apart from storytelling, engaging in visual arts is another important activity that has a positive impact on children's development of emergent literacy skills. Engaging in art-based activities like drawing and painting provides children an opportunity to make meaning of what they experience, which might be real or imagined. This ability of meaning making through representation, symbols and drawing inferences is an important precursor to literacy (Kress, 1997). Furthermore, multi-modal representation of learning through art, stories and direct instructions lead to a deeper understanding of the content being taught, as there are multiple opportunities to engage with the content through different mediums (Barton and Baguley, 2014).

### **PRESENT STUDY**

The aim of the present study is to investigate whether a multi-modal intervention using digital storytelling and art can be used to advance emergent literacy skills and foster parental engagement in learning amongst children aged 3–6 attending the Government *Anganwadi* in the Mayur Vihar, New Delhi. As past literature has already pointed out, this age is the ideal time to start working on a child's emergent literacy skills, given the advancements in cognitive representational ability and symbolic thinking. Moreover, given the fact that the participants hail from a lower socioeconomic background where exposure to print material, stories, vocabulary or other elements of a

literacy environment are most likely to be dormant, such an intervention is perceived to be beneficial. Within emergent literacy skills, the intervention is specifically focused on oral literacy and comprehension. These skills were chosen as they have been found to be the pre-requisite skills for the other emergent literacy skills involving reading and writing (Dickinson and Tabors, 2001; Kleeck, 2008).

### **METHODOLOGY**

#### ***Aim***

The aim of the present study is to investigate whether a multi-modal intervention using digital storytelling and art can be used to advance emergent literacy skills and foster parental engagement in the learning processes amongst children aged 3–6 attending the government *Anganwadi* in Mayur Vihar, New Delhi.

#### ***Research Question***

The following are the research questions for the study.

Does participating in a multimodal intervention based on digital storytelling and art improve:

- (a) The level of oral literacy among children belonging to the age group of 3–6 years.
- (b) The comprehension skills among children belonging to the age group of 3–6 years.
- (c) Foster parent child engagement in the learning processes of the child amongst parents of children belonging to the age group of 3–6 years.

### **Research Design**

This study followed a quasi-experimental, one group pretest-post-test with mid-term evaluation research design. The dependent variables in the study are the levels of oral vocabulary, comprehension skills, and parent-child engagement in the learning processes. The independent variable in the study is the exposure to two months long multi-modal intervention based on digital storytelling and art.

### **Sample**

Participants (n = 17) belonging to age group 3–6 years (mean age = 4.5 years) with 9 girls and 8 boys residing in Delhi NCR were selected using the non-probability technique of convenience sampling. Mothers of these children (n = 17) were contacted for data related to parent-child engagement.

### **Tools**

The following are the tools used for the purpose of data collection in this study. *Content based questionnaire:* A questionnaire containing both open ended and close ended questions were administered with the aim of assessing oral vocabulary and comprehension. This questionnaire had questions based on an audio story that the field coordinators were required to play, just before administering the tool. The administration was oral, such that the field coordinators asked the question and recorded the responses given by the child.

### **Semi-structured Interview**

A semi-structured interview was conducted with the parents with the

aim of collecting data on the level of parental engagement, their observation of child's engagement and learning, and exposure to art.

*Field observation notes:* The field coordinators who were implementing the intervention on field were given certain prompts that encouraged naturalistic observation for certain behaviours amongst children and parents. This includes behaviours like a child's level of interest in the intervention, child's clarity of diction, parental involvement and cooperation.

### **STUDY PROCEDURE**

The study's design involved an extensive literature review to establish the aim, specific objectives, and intervention nature. Subsequently, 17 participants attending a Government *Anganwadi* centre in Mayur Vihar, New Delhi were selected with the assistance of *Anganwadi* workers. Each participant received a speaker and secure digital memory card containing 30 pre-recorded stories on various topics, such as body, hygiene, animals, plants, senses, and emotions.

The intervention sessions, lasting 30 minutes each, followed a structured approach. The child was introduced to the story's theme, then an audio story was played on the speaker. Afterwards, a conversation was initiated to discuss the story's key takeaways. The session concluded with an age-appropriate activity in a workbook.

A baseline assessment was conducted after two weeks, evaluating oral literacy skills, comprehension,

and parent-child engagement through a content-based questionnaire with open and closed-ended questions, administered orally. Midline assessment occurred after 4 months, and endline assessment after 8 months of the intervention’s implementation. These assessments aimed to gauge the intervention’s effectiveness and impact on the participants’ emergent literacy skills and parent-child engagement in the learning process.

**RESULTS**

The following section elaborates on the results of baseline, midline and endline assessment obtained through the study.

**Oral Vocabulary**

Oral vocabulary refers to words that children can understand or use while speaking and listening.

For the purposes of this study, oral vocabulary has been divided into three sub categories—(i) unique words used by the child, which the child picks up from the story (ii) own words used by the child, i.e., the child’s ability to use their own language to explain their perspective and (iii) clarity in speech.

It is also noteworthy that the participant’s ability to describe objects substantially improved over the three assessments. While in the baseline assessment, the participants gave one word answers which were often irrelevant to context, by midline the participants were able to describe objects by the shape, size, colour. By the endline, the participants gave more detailed responses connecting objects to personal experiences (For example, I’ve seen something like this on TV).

**Table 1**  
**Percentage of the Children’s Performance**  
**in the Oral Vocabulary**

<b>Oral Vocabulary</b>	<b>Baseline</b>	<b>Midline</b>	<b>Endline</b>
Unique words used (from the story)	17.6%	29%	88%
Own words used	29.4%	100%	100%
Diction/Clarity in Speech	35%	100%	100%

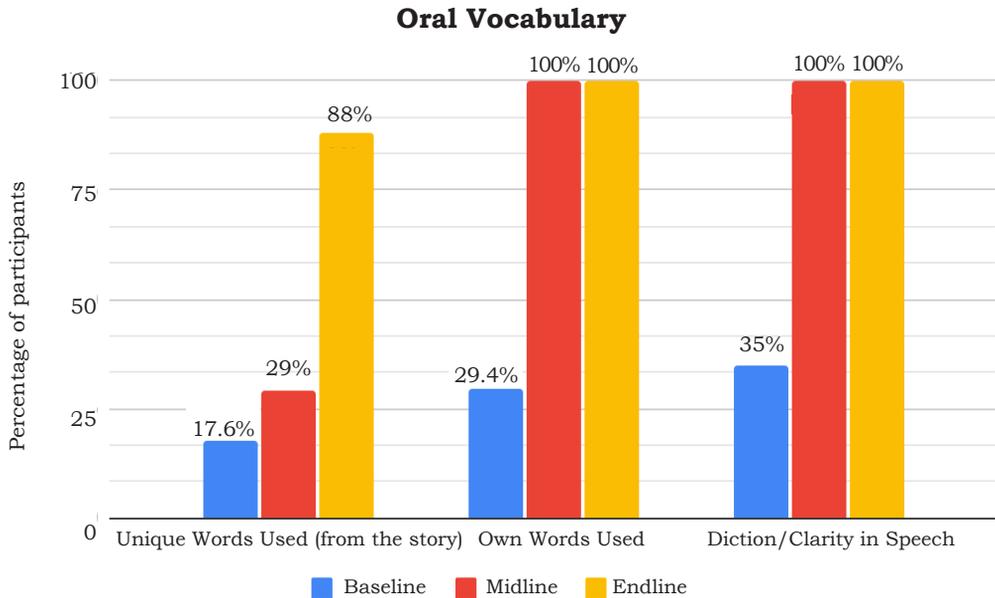


Fig. 1: Graph representing Percentage of the Children’s Performance in the Oral Vocabulary

**COMPREHENSION**

Comprehension involves engaging in meaningful experiences that stimulate the development and use of meaning-making strategies (McMunn and Matthews, 2009). For the purpose of this study, comprehension has been divided into two subcategories—(i) recall, i.e., ability to basic information

from the story heard like plot, name of protagonist, series of events, etc., (ii) Forming connections, assimilation and application, i.e., the ability to connect information learnt with everyday experiences, evaluate how one would respond in place of the protagonist of the story and define the moral of the story.

**Table 2**  
**Participant’s Performance on Comprehension (Level 1: recall)**

Domain	Baseline	Midline	Endline
Correct recall	8.8%	70.5%	88.23%
Incorrect recall	64.7%	29.4%	11.7%
Participant did not answer	26.4%	0	0

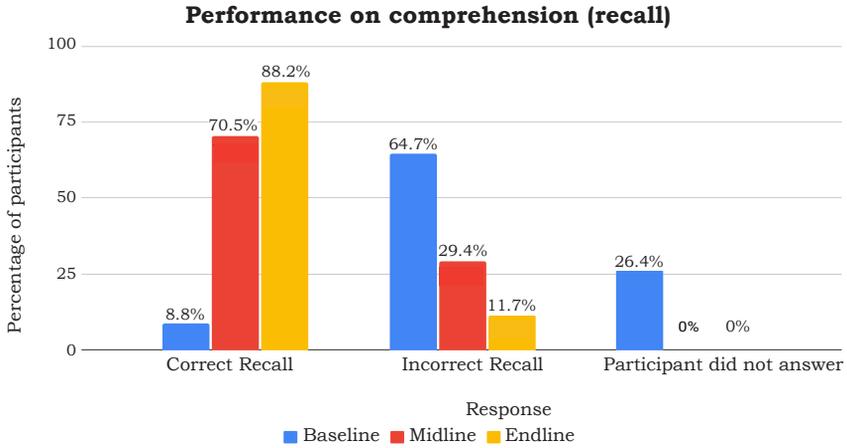


Fig.2: Graph representing participant’s performance on comprehension (recall)

**Table 3**  
**Participant’s Performance on Comprehension**  
**(Level 2: Forming connection, assimilation and application)**

Domain	Baseline	Midline	End line
Correct response	11.7%	55.2%	57.6%
Incorrect response	49.4%	29.4%	30.5%
Participant did not answer	38.8%	14.1%	11.7%

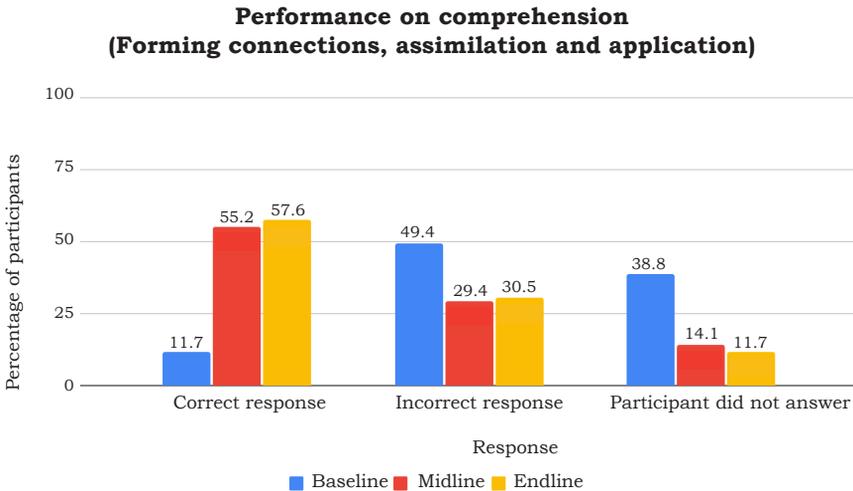


Fig.3: Graph representing participant’s performance on comprehension

**Proxy Indicators-sustained Attention, Level of Interest and Initiative Taking**

Integral to comprehension are associated indicators including attention, level of interest amongst the participants and how forth-coming they were during the process of data collection. These proxy indicators were measured in the present study to further provide

insight into the emergent literacy skills of the participants. Data on these indicators were collected through the field observations of the facilitators.

**Parent-Child Engagement**

Data on parent-child engagement was collected through semi structured interviews conducted.

**Table 4**  
**Percentage of Participants showing Sustained Attention, Interest and Initiative Taking**

Domain	Baseline	Midline	Endline
Sustained attention	64.7%	94.1%	94.1%
Interest	76.5%	94.1%	94.1%
Initiative taking	5.9%	17.6%	47%

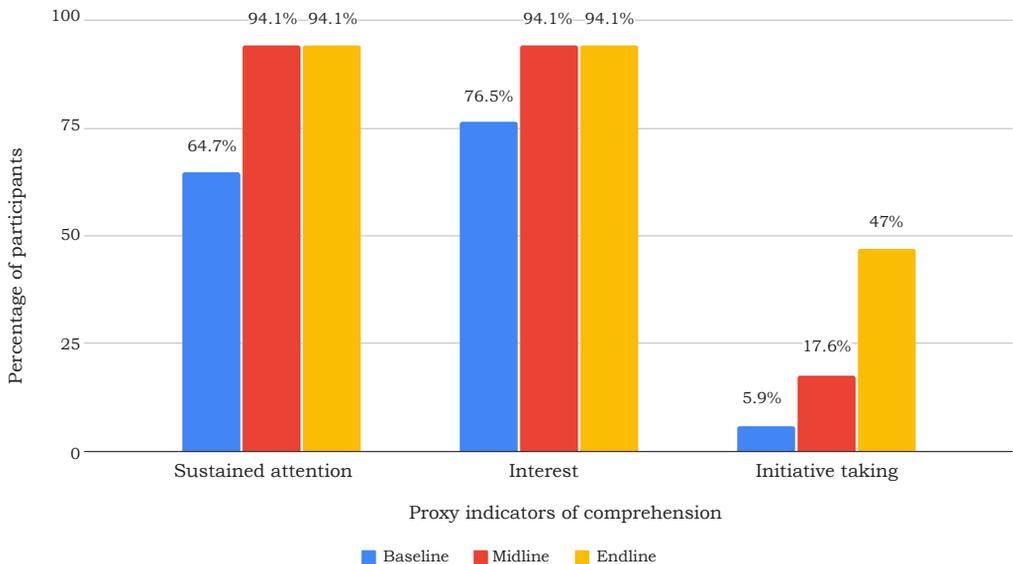


Fig. 4: Graph representing percentage of participants showing sustained attention, interest and initiative taking

**Table 5**  
**Percentage of Parents Engaging in Different Activities with their Children**

Activities that parents engage in with their child	Baseline	Midline	Endline
Studying	58.8%	88.2%	100%
Watching television or using mobile phone	94.1%	76.4%	82%
Playing	58.8%	52.9%	53%
Drawing	5.8%	17.6%	17.6%
Listening to music	5.8%	0	0
Listening to intervention stories	0	29.4%	71%

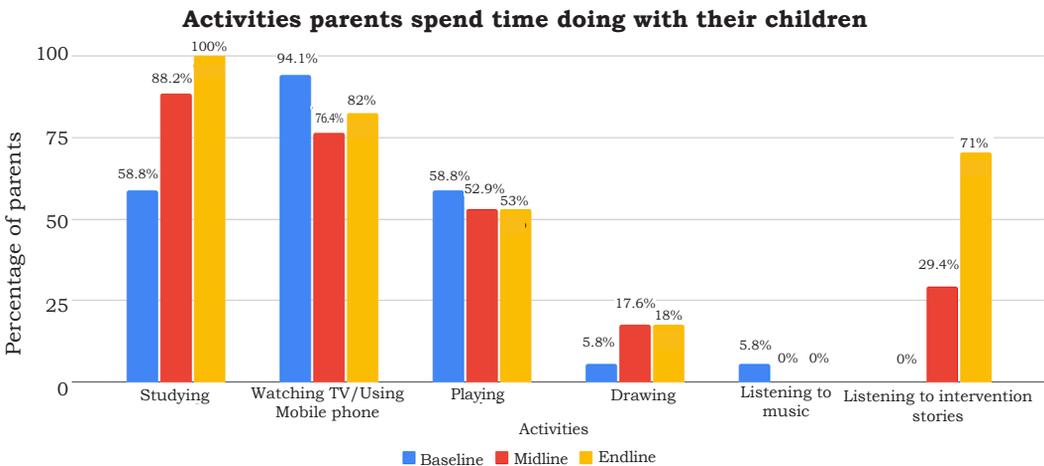


Fig. 7: Graph showing Parent-Child Engagement

**DISCUSSION**

The aim of the present study is to investigate whether a multi-modal intervention using digital storytelling and art can be used to advance emergent literacy skills and foster parental engagement in the learning processes amongst children aged 3–6 attending the government *Anganwadi* in Mayur Vihar, New Delhi. For this purpose, an intervention was designed

and implemented with a selected sample of 17 participants. Impact evaluation data in terms of baseline, midline and endline was collected and analysed.

The intervention in terms of its modality (digital storytelling and art) and nature (child-centric) was a novel exposure for the participants in many ways. Data collected in the baseline reveals that while a majority of the

participants (70.6 per cent) had been exposed to arts of storytelling, dancing, music and drawing, the source of the exposure was mostly television and mobile videos (58.3 per cent). Other sources reported included activities in Anagawadi centres or their homes.

### **Oral Vocabulary**

The results obtained suggest that there has been an overall upward trajectory as far as oral vocabulary skills of the participants are concerned. This involved increased use of words that the children listened in the stories, improvement in using their own words while answering questions and more clarity in speech in the endline, as compared to the baseline.

The increased use of words that the participants heard in the stories could be attributed to three specific features of the story.

Firstly, the stories were designed in a manner that involved repetition of certain keywords. Repeatedly listening to these words being used in sentences in the context of a story helped the participant learn pronunciation as well as the meaning and usage of the word. Secondly, the stories were designed keeping in mind the cultural context of the participants. Thus, the words learnt by the participants were associated with their environment, making it easy for them to understand the meaning of the same. Thirdly, the workbook used for art activities after the story telling session, involved activities related to the concepts introduced in the story. The exposure to the newly learnt words, through visual representation after listening to the stories, acts as a reinforcer of the words learnt in the session.

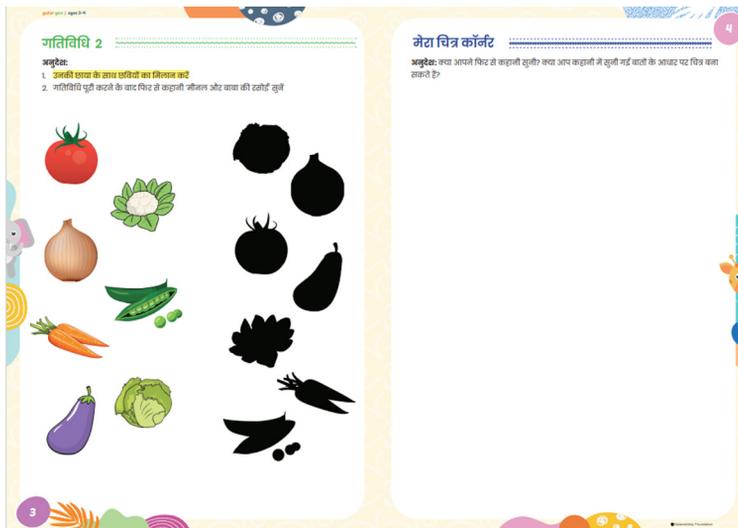


Fig.6: An example of an activity is included in the workbook, reinforcing concepts learnt through digital storytelling

These findings are in line with the identifiable features of stories that lead to enhancements in vocabulary suggested by Elley (1989) in his research. Elley (1989) suggests that children are more likely to learn new words through storytelling depending on the frequency of occurrence of the word in the story, the familiarity of the context of the story, and the frequency of occurrence of the word in pictorial representation.

Further, researchers have found that oral literacy skills are best developed through a combination of social interaction and direct instruction (Dugan, 1997; Craig, Hull, Haggart and Crowder, 2001). The discussions with the participants on the main theme of the story, after listening to the story, encouraged them to practice using the linguistic skills that they picked by listening to the stories. This might have led to an improvement in using their own words while answering questions with more clarity in speech.

**Comprehension**

Based on the results obtained, it can be concluded that there has been a general increase in the comprehension abilities of the participants, over the

course of the intervention. The data collected and analysed with respect to comprehension has been understood with the five stage model of effective listening and comprehension given by DeVito (2000). It is important to note that all the stages of the model are interdependent in nature, and the effective completion of one stage positively impacts the next.

In the context of the intervention, receiving of information is related to the intentional focus on listening to the story being played, and activities of the workbook. Indicators for this include the percentage of participants showing sustained attention, i.e., the ability to maintain attentional focus on relevant stimuli with repeated presentation over extended periods (Sarter, Givens and Bruno, 2001) and interest, i.e., favourable attitude and desire to attend to the story and activities. Based on the observational data collected, it is observed that there has been an increase of 45.4 per cent increase in participants showing sustained attention from baseline to midline, with the same figures being maintained in the endline. Similarly, the percentage of participants showing interest in the stories and the activities

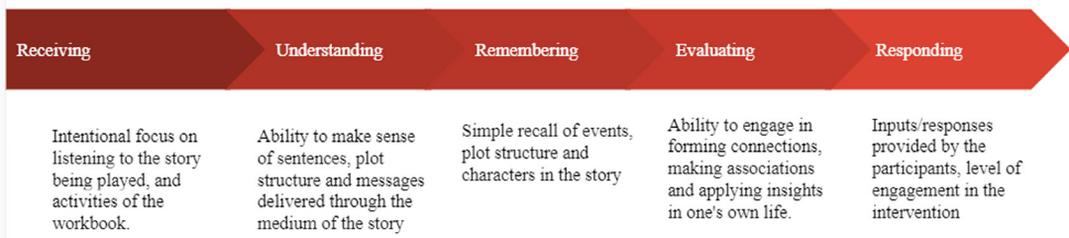


Fig. 7: Diagram representing DeVito's (2000) model in relation to the intervention

of the intervention increased by 23 per cent from baseline to midline, with the positive change being sustained till the endline. This advancement could be attributed to a number of factors such as the audio jingles and music in the digital stories (Requejo, 2016), child-centric and engaging nature of the intervention (Van Gils, 2005) or familiarity of the context of the story, making it more relatable and thus, more interesting for the child.

The second stage to effective listening and comprehension is understanding. In the context of the intervention, it refers to the ability to make sense of sentences, plot structure and messages delivered through the medium of the story. Enhancements in oral vocabulary, as discussed above, plays a major role in this step.

The third stage of the model, i.e., remembering refers to simple recall of events, plot structure and characters in the story. The results obtained suggest that there has been an increase of 79.4 per cent of participants who are able to give correct answers to questions that required recalling simple information from the story. This increase could be attributed to the successful completion of the above mentioned steps of receiving and understanding, as indicated by increases in sustained attention, interest and oral vocabulary.

Further, the next stage of the model is evaluating. This can be conceived as a deeper level of comprehension as indicated by forming connections, making associations and applying

insights in one's own life. Results suggest that there has been a 45.9 per cent increase in the percentage of participants who are able to provide relevant responses to questions that involve them to form connections, make associations or apply learnings to their own lives.

The last stage of the model corresponds to responding. Two indicators, i.e., percentage of participants who do not answer during the impact evaluation and percentage of participants who show initiative taking, provide interesting insights about this stage. It is noteworthy that there is a drop in the percentage of participants from baseline to endline who do not respond to the facilitator's questions for both recall related questions (26.4 per cent decrease) and deeper level comprehension questions (27.1 per cent decrease). This decrease in percentage could be attributed to several direct intervention related factors (like better comprehension, enhanced oral vocabulary, greater interest) and indirect factors (rapport with the facilitator, enhanced confidence due to familiarity with the process, etc.). Lastly, the proxy indicator of level of initiative taking also supplements the understanding of this stage. There is a 41.1 per cent increase in the percentage of participants who are observed to be forthcoming, and willing to take initiative in the sessions. This increase directly corresponds to higher levels of engagement in the intervention, and thus, reinforces comprehension skills.

### ***Parental Engagement in the Learning Process of the Child***

Based on the results, it is observed that there is a shift in the kind of activities in which parents engage with their children. During the baseline, a maximum percentage of parents engaged in watching television and playing games on mobile phones (94.1 per cent) with their children. However, in the midline, it was observed that a greater percentage of parents engaged in studying (88.2 per cent), drawing (17.6 per cent) and listening to the intervention stories (29.4 per cent) with their children. By the end of the intervention, 100 per cent of the parents got involved with the child's studies, and 71 per cent listened to the intervention stories. Thus, it is observed that the engagement of parents throughout the course of the intervention, changed from activities like watching television to activities that required more involvement of the parent like studying with the child, drawing and listening to the intervention stories.

Parental involvement has been regarded as an important variable impacting language development and emergent literacy amongst children. Regular participation of parents in activities like reading, listening to stories or other literacy related tasks has been found to have significant positive influences not only on reading achievement, language comprehension and expressive language skills (Gest, Freeman, Domitovich and Welsh, 2004). Also on the interest levels,

attentiveness and attitudes towards reading and literacy development in the classroom (Rowe, 1991). Furthermore, research literature has pointed towards the direction that parental involvement in child's literacy development is a more powerful predictor of success, when compared to other family background variables such as social class, family size and level of parental education (Flouri and Buchanan, 2004). Lastly, researchers have also suggested that the earlier parents become involved in the child's literacy practices, the more profound and long lasting effects are observed (Mullis, Mullis, Cornille, Ritchson and Sullender, 2004).

### **LIMITATIONS OF THE STUDY AND FUTURE DIRECTIONS**

The study's positive outcomes should be considered alongside its limitations. The small, homogenous sample size (n=17) limits generalisability and replication. Self-constructed data tools lack validity and reliability but were chosen for simplicity and relevance to the context of the participants, thereby eliciting quality data. Being mindful of these limitations is essential for interpreting the study's findings comprehensively.

### **CONCLUSION**

The aim of the present study was to investigate whether a multi-modal intervention using digital storytelling and art can be used to advance emergent literacy skills (specifically Oral Vocabulary and Comprehension) and foster parental engagement in the

learning processes amongst children aged 3–6 years. Towards this end, significant positive changes were noted with respect to all three objectives from baseline to midline to endline data collection. Certain identified features that have possibly contributed to the attainment of objectives were identified and elaborated on. Despite the positive results, the study suffers from certain

limitations in terms of sample size, composition and the nature of tools being used. The study has far reaching implications with respect to using digital storytelling and art based pedagogies in elementary schools for building emergent literacy skills, particularly in the context of lower socioeconomic background where a rich literacy environment may not be available.

### REFERENCES

- BARTON, G AND M. BAGULEY. 2014. Learning through Story: A Collaborative, Multimodal Arts Approach. *English Teaching: Practice and Critique*. Vol. 13, No.2. pp. 93–112.
- BENNETT, K., J. DANIEL AND S. MARTIN, 2002. Children's Acquisition of Early Literacy Skills: Examining Family Contributions. *Early Childhood Research Quarterly*. Vol. 17, No.3. pp. 295–317. Retrieved from [http://dx.doi.org/10.1016/S0885-2006\(02\)00166-7](http://dx.doi.org/10.1016/S0885-2006(02)00166-7).
- CARROLL, J. M., A. J. HOLLIMAN, F. WEIR AND A. E. BAROODY. 2019. Literacy Interest, Home Literacy Environment and Emergent Literacy Skills in Preschoolers. *Journal of Research in Reading*, Vol.42, No.1, pp. 150-161.
- CONNOR, C. M., F. J. MORRISON AND L. SLOMINSKI 2006. Preschool Instruction and Children's Emergent Literacy Growth. *Journal of Educational Psychology*. Vol. 98, No.4. p. 665.
- CRAIG, S., K. HULL, A. HAGGART AND E. CROWDER. 2001. Storytelling: Addressing the Literacy Needs of Diverse Learners. *Teaching Exceptional Children*. Vol. 43, No.5. pp. 46–51.
- DEVITO, J. A. 2000. *The Elements of Public Speaking*. New York, NY: Longman.
- DEVITO, J. A., S. O'ROURKE AND L. O'NEILL. 2000. *Human Communication*. New York: Longman.
- DICKINSON, D. K AND P. O. TABORS. 2001. *Beginning Literacy with Language: Young Children Learning at Home and School*. Paul H Brookes Publishing.
- DUGAN, J. 1997. Transactional Literature Discussions: Engaging Students in the Appreciation and Understanding of Literature. *Reading Teacher*. Vol. 51, No.2, pp. 86–96.
- ELLEY, W. B. 1989. Vocabulary Acquisition from Listening to Stories. *Reading Research Quarterly*. Vol. 24, No.2. pp. 174–187.
- FLOURI, E., AND A. BUCHANAN. 2004. Early Father's and Mother's Involvement and Child's Later Educational Outcomes. *British Journal of Educational Psychology*. Vol. 74, No.2. pp. 141–153.
- GEST, S. D., N. R. FREEMAN, C. E. DOMITROVICH AND J. A. WELSH. 2004. Shared Book Reading and Children's Language Comprehension Skills: The Moderating Role Of Parental Discipline Practices. *Early Childhood Research Quarterly*. Vol. 19, No.2. pp. 319–336.

- GUNN, B. K., D. C. SIMMONS AND E. J. KAMEENUI. 1995. *Emergent Literacy: Synthesis of The Research*. Eugene, Oregon: National Center to Improve the Tools of Educators, College of Education, University of Oregon.
- GUO, Y., L. M. JUSTICE, J. N. KADERAVEK AND A. MCGINTY. 2012. The Literacy Environment of Preschool Classrooms: Contributions to Children's Emergent Literacy Growth. *Journal of Research in Reading*. Vol. 35, No.3. pp. 308–327.
- HAMMER, C. S. AND A. W. MICCIO. 2006. Early Language and Reading Development of Bilingual Preschoolers from Low-Income Families. *Topics in Language Disorders*. Vol. 26, No.4. p. 322.
- JUSTICE, L. 2006. *Clinical Approaches to Emergent Literacy Intervention*. San Diego: Plural.
- KALIA, V AND E. REESE. 2009. Relations Between Indian Children's Home Literacy Environment and their English Oral Language and Literacy Skills. *Scientific Studies of Reading*. Vol. 13, No.2. pp. 122–145.
- KIRKGÖZ, Y. 2018. Fostering Young Learners Listening and Speaking Skills. In S. Garton, and F. Copland, *The Routledge Handbook of Teaching English to Young Learners* (pp. 171–187). New York: Routledge.
- KLECK, A. V. 2008. Providing Preschool Foundations for Later Reading Comprehension: The Importance of and Ideas for Targeting Inferencing in Storybook Sharing Interventions. *Psychology in the Schools*. Vol. 45, No.7. pp. 627–643.
- KOSARA, R AND J. MACKINLAY. 2013. Storytelling: The Next Step for Visualisation. *Computer*. Vol. 46, No.5. pp. 44–50.
- KRESS, G. 1997. *Before Writing: Rethinking Paths Into Literacy*. London: Routledge.
- McMUNN, D AND M. MATTHEWS. 2009. Emergent comprehension: Understanding comprehension development among young literacy learners. *Journal of Early Childhood Literacy*. Vol. 9, No.3. pp. 269–294.
- MELLO, R. 2001. Building Bridges: How Storytelling Influences Teacher/Student Relationships. *The Journal of Higher Education*. Vol. 17, No.6. pp. 301–307.
- MILLER, E AND J. ALMON. 2009. Crisis In The Kindergarten: Why Children Need to Play in School. *Alliance for Childhood*, NJ3a.
- MULLIS, R. L., A. K. MULLIS, T. A. CORNILLE, A. D. RITCHSON AND M. S. SULLENDER. 2004. *Early Literacy Outcomes and Parent Involvement*. Tallahassee, Florida: Florida State University.
- PIAGET, J. 1971. The Theory of Stages in Cognitive Development. In D. Green, M. Ford, and G. Flamer, *Measurement and Piaget*. New York: McGraw-Hill.
- REQUEJO, M. D. 2016. Music in Multimodal Narratives: The Role of the Soundtrack in Digital Stories. *Audionarratology: Interfaces of Sound and Narrative*. Vol. 52, No. 29.
- ROBIN, B. 2006. *The Educational Uses of Digital Storytelling*. Houston : University of Houston.
- ROWE, K. J. 1991. The Influence of Reading Activity at Home on Student Attitudes towards Reading, Classroom Attentiveness, and Reading Achievement: An Application of Structural Equation Modelling. *British Journal of Educational Psychology*. Vol. 61, No. 1. pp. 19–35.

- SARTER, M., B. GIVENS AND J. P. BRUNO 2001. The Cognitive Neuroscience of Sustained Attention: Where Top-Down Meets Bottom-Up. *Brain Research Reviews*. Vol. 35, No. 2. pp. 146–160.
- SÉNÉCHAL, M., J. A. LEFEVRE, E. M. THOMAS AND K. E. DALEY. 1998. Differential Effects of Home Literacy Experiences on the Development of Oral and Written Language. *Reading research quarterly*. Vol. 33, No. 1. pp. 96–116.
- SIMMONS, A. 2006. Building Trust Several Stories High. Storytelling. *Self, Society*. Vol. 2, No. 2. pp. 50–67.
- VAN GILS, F. 2005. Potential Applications of Digital Storytelling in Education. 3rd Twente Student Conference on IT.