



## Typography and Storytelling

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# Exploring Child Psychology through Writing Patterns: Emotional Expression, Storytelling, and Experimental Typeface Design

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**Abstract:** Child psychology plays a vital role in understanding children's cognitive development and behavior, especially as reflected in their writing patterns. Writing serves as more than communication; it reveals children's thoughts, emotions, and perspectives. Young writers often exhibit spontaneous, imaginative styles, providing insight into their developmental stages in language and narrative skills. Through storytelling, children explore feelings such as happiness, fear, and curiosity, intertwining creativity with emotional growth. Encouraging age-appropriate storytelling activities, like imagining new worlds or reframing personal experiences, enhances writing skills and emotional intelligence. A recent experiment explored how children's handwriting styles reflect story themes. Participants wrote story titles, which were synthesized into typeface designs. These typefaces captured the narratives' tone, highlighting handwriting's expressive potential. This approach extends to advertising, where childlike typefaces can emotionally resonate with young audiences. By integrating child psychology into typography, storytelling and visual communication for children can reach new heights.

**Key words:** *Child psychology, Handwriting patterns, Storytelling, Experimental typeface design.*

### 1. Introduction

Storytelling plays a major role in shaping a child's cognitive and emotional development. From young age, children are drawn naturally to narratives from books, cartoons, or movies. They internalize stories in unique ways, grasping meaning and interpreting themes. The interpretation is on the strength of children's understanding and imagination. Therefore, if kids watch a cartoon, such as Tom and Jerry, Doraemon, or Superman, the

child is full of energy and has to express this energy through its inherent outlets. These are activities with the power to unlock their inner selves and illuminate their feelings, thoughts, and opinions.

A child may not be able to explain in words why he or she loves a particular character, but they show it in ways that feel most natural to them – scribbling their favorite hero's name, sketching their own versions of a scene, or even acting out moments they love. These small but meaningful actions reveal how they internalize and personalize a story.

### **1.1 Background study**

Usually, books, movies, and cartoon characters created for children were designed by individuals passionate about exploring child mindset. Through their work, they crafted environments where children could play, explore, and imagine freely. However, if given the opportunity to create from their own perspective, children might produce something truly remarkable. So why not encourage them to actively participate in the creative process?

### **1.2 Finding gaps**

There is a gap in children's content creation where kids themselves can actively participate, contributing based on their unique talents and abilities.

## **2. Literature study**

### **2.1 Child psychology**

Child psychologists find crying important because it is a baby's first and only way to communicate its needs (Padly- Alpattani, 2020). Child psychology is the study of how children grow, think, feel, and behave from infancy to adolescence. It focuses on emotional, cognitive, social, and behavioral development. Child psychology examines the myriad factors influencing a child's behavior, emotional well-being, and cognitive development. Child psychology is the study of how children's minds work, how they grow and change from birth to adolescence, and how their thinking is different from adults. It also looks at why children develop in different ways from one another (Encyclopedia Britannica). Every child is unique, and experiences shape up their personality and behavior. Children love to play and feel happy in a caring and supportive environment. Positive relations with parents, teachers, and friends are most significant for children's emotional development. Stress, fear, or neglect can affect a child's mental health and development. A knowledge of child psychology helps the parents and the care-giver to

support a child in learning, handling his emotions, and developing good relations. This leads to healthier and happier childhoods.

## **2.2 Childs thinking process**

Children's thinking grows by distinctive stages as they grow. Each stage has unique ways of understanding and interacting with the world. Piaget's stages of development describe how children learn as they grow up. Piaget's theory is best known for its focus on how children construct knowledge actively through interaction with their environment. The four key stages of cognitive development identified by Piaget are the sensorimotor (birth to 2 years), preoperational (ages 2 to 7), concrete operational (ages 7 to 11), and formal operational stages (ages 12 and up).

**Sensorimotor (birth to 2 years):** During the first two years of life, babies grow, learn, and explore every day. Piaget called this the sensorimotor stage, where infants use their senses like touch, sight, and sound, along with movement, to understand the world around them. They often put things in their mouths, like their hands, toys, or even a cat's tail, because that is how they learn. A major milestone in this stage is object permanence, which means babies realize that things still exist even when they can't see them. For example, if you hide a toy from a baby who understands object permanence (usually around 8 months old), they will try to find it (Piaget's Theory).

**Preoperational (ages 2 to 7):** During the preoperational stage (2-7 years old), children start thinking symbolically, meaning they use symbols to represent words, objects, people, and ideas. This ability helps them do many new things. They can imitate others, even when the person is not there, like walking the way someone else does or pretending to be an airplane by spreading their arms. They enjoy pretend play, turning a stuffed animal into a baby or acting as a parent. Drawing becomes more meaningful as they move from scribbles to simple pictures of people and objects. They also create mental images and often ask for names of things to understand them better. They begin to describe their experiences using words, showing they are learning and thinking about the world around them. However, they still think in an egocentric way, meaning they struggle to see things from someone else's point of view (Rick A, Frances G, Amy G, 2024).

**Concrete operational (ages 7 to 11):** During the concrete operational stage (ages 7 to 11) is when children start thinking in a more logical and organized way. They can understand and work with real, tangible objects but struggle with abstract ideas. At this stage, they develop important skills like reversibility (understanding that actions can be undone), conservation (knowing that quantities stay the same even if appearance changes), and

classification (grouping objects based on common traits). While they can solve logical problems, they need real examples to understand them. Piaget (1954) saw this stage as a big step in a child's thinking because it marks the beginning of logical reasoning, though still tied to physical objects (Simply Psychology).

**Formal operational stages (ages 12 and up):** During the Formal operational stages (ages 12 and up), children learn more advanced ways of thinking. They use logic to understand abstract ideas and solve problems. They can observe their surroundings, think about possible outcomes, and make guesses about the future based on what they already know. This ability is called hypothetical-deductive reasoning. It helps them ask, "What if?" and imagine different solutions and results for a situation (Medical News Today).

### 2.3 Childs learning process

Early learning processes in children include the development of reading, writing, and comprehension skills, which are all part of emergent literacy.

**Reading Development:** From birth, children start learning the basic skills needed for reading. When they hear stories and look at books, they begin to enjoy them and become interested in reading. As they grow, they learn that words in books have meaning and how to hold and use a book properly. They also learn new words by naming things around them and telling stories. Children start to recognize that letters are different from each other, learn their names and sounds, and see them in different places. Another important skill is hearing and playing with small sounds in words, which helps them read better (NAEYC).

**Writing Development:** Young children start writing by making marks on paper to express themselves. Giving them things like pencils, markers, and paper helps them practice. They may scribble, write random letters, or make up their own spellings. This helps them develop hand control and understand that writing has meaning. Playing with writing, like making a pretend shopping list or writing in a make-believe doctor's note, makes learning fun and helps them improve (NAEYC).

**Understanding and Comprehension:** Children develop comprehension skills through interactive reading. Reading aloud to them is very important because it helps them understand words, sounds, and how letters form words. When children feel safe and happy while reading, they learn better (NAEYC).

As they keep learning, they start recognizing patterns in words, making reading and writing easier and more natural for them. Every child learns at their own speed, so their

progress can be different. Creating a learning-friendly environment with books, writing activities, and supportive conversations helps children build strong reading and understanding skills.

### 3. Aim and Objectives

**Aim:** An exploratory study on children's creative expressions through various writing styles.

#### Objectives:

1. Observing writing styles and patterns of children within the age group from 4 to 8 years
2. Invite group of children from different background and different age groups from 4 to 8 years for testing writing styles.
3. Shortlisting of best writing styles based on creativity, uniqueness and clarity.
4. Converting the most suitable writing styles into a workable typeface for practical application.

### 4. Methodology

#### 4.1 Set up design experiment

A detailed process of design experiment with various stages have been set up to conduct a survey on writing style of different children groups. Children of various age groups were invited to participate in hand writing style exploration based on their favorite topics. Along with that adults were also invited to participate in the writing exercise to check and compare for creative skills and imagination.



Figure. 1 Adult participants

#### 4.2 Observing writing styles of children from target age group

Among all the children invited to participate in the handwriting exercise, writing styles of the target group were observed thoroughly for further exploration.



Figure. 2 Children participants and their hand writing styles

#### 4.3 Shortlisting of most interesting, unique and creative writing styles

Out of all the children took part in handwriting style exploration, the creation of children who are among the target age group have been separated out for further study. The writing styles were shortlisted based on uniqueness, creative idea, readability, visual appeal and focus to context.

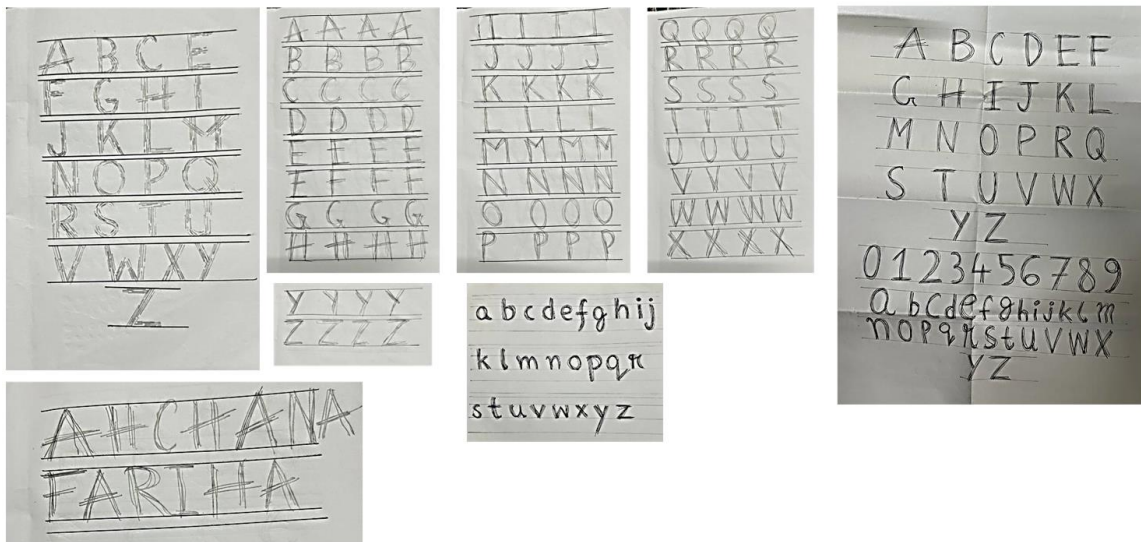


Figure. 3 Handwriting styles of children from target group

#### 4.4 Testing of the writing styles by digitizing them

After collection of all the writing styles made by children, the writings were then cleaned up for digitization to create digital characters.

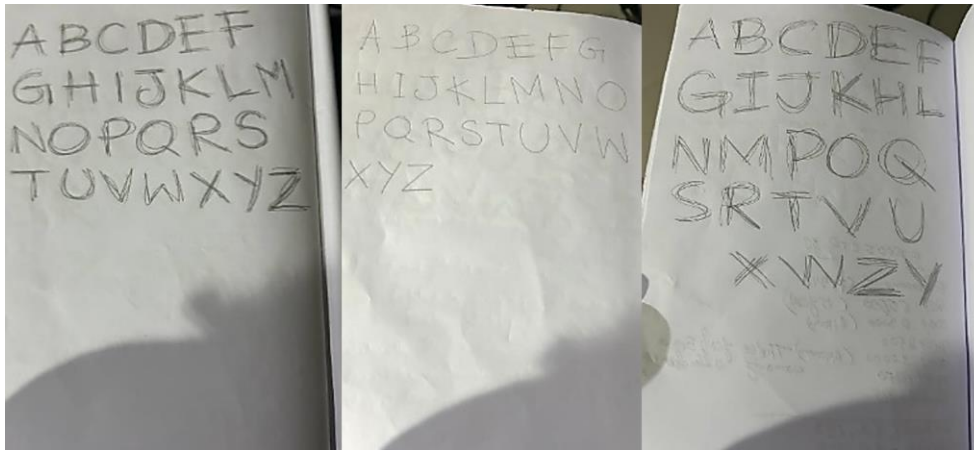


Figure. 4 Selected writing styles for digitization

Digitization of writing styles were done by scanning and using Adobe Illustrator the characters were recreated as vector illustration.

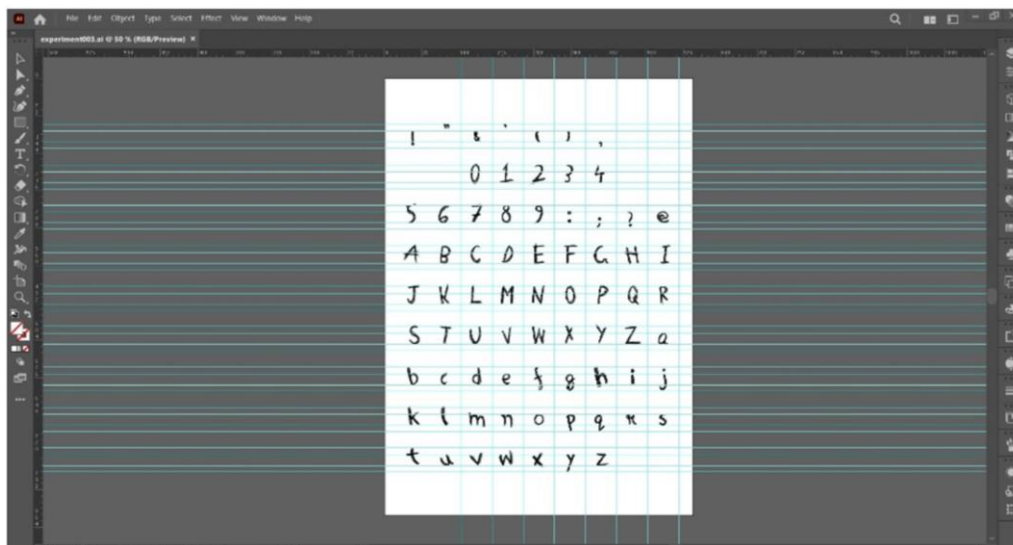


Figure. 5 Digitization of handwritten characters.

#### 4.5 Converting the most suitable writing style into a workable typeface for practical application

After digitization and vector illustration, the new characters have been prepared for converting into an applicable typeface. For making a workable font from digital characters, online web application “Calligraphr” have been used which offers free tools for students to create custom fonts. All the vector characters were put on the standard template as provided by the web application to convert into a workable font.

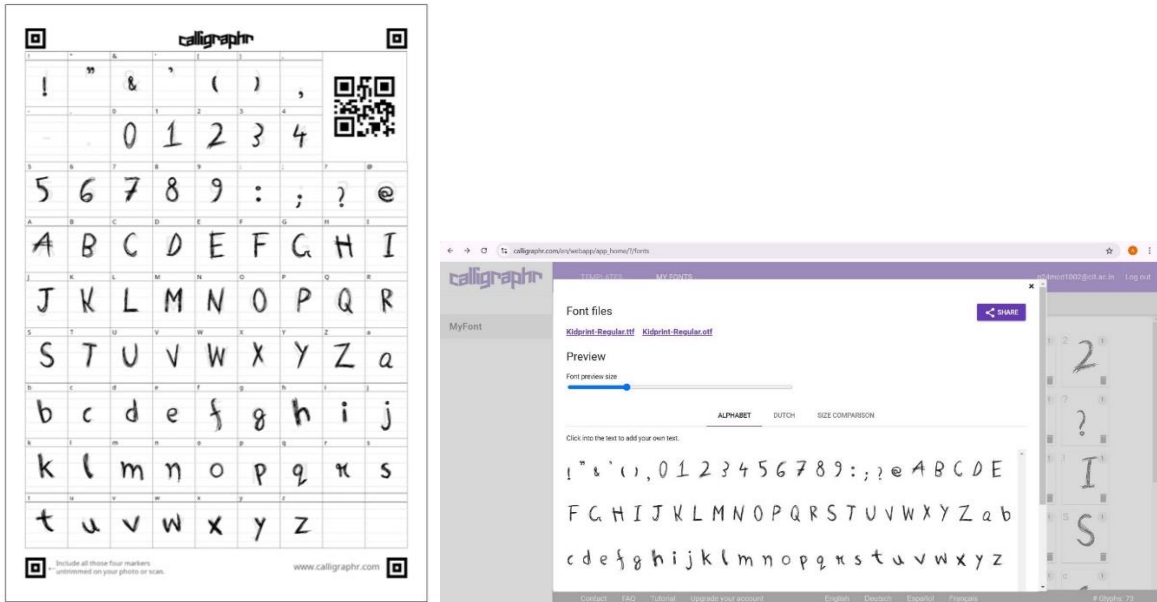


Figure. 6 Calligraphr template for font creation.

#### 4.6 Testing the final font on different subjects addressing children

After the typeface was developed in True Type format, it has been applied on various subject areas related to children to see the results. The name of the typeface was given as “KID PRINT”



Figure. 7 Final view of the typeface KID PRINT after converting into True Type format

##### 4.6.1 Application on different subject areas.

The new typeface can be used for designing children’s nursery books.



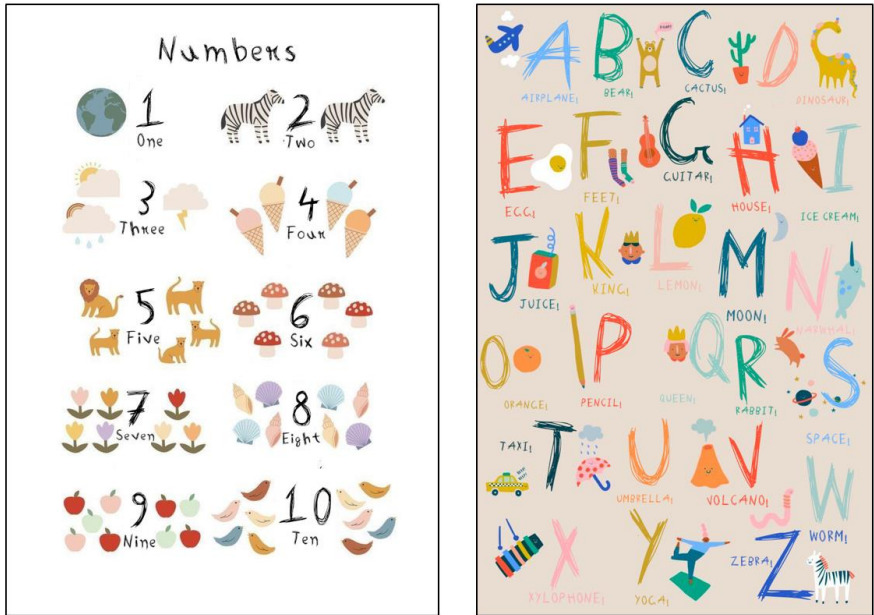


Figure. 8 Designing pages of a children’s nursery book



Figure. 9 Various uses of the typeface KID PRINT on different subject areas

#### **4.7 User review**

A basic user survey was done among teachers, parents, designers as well as children themselves to check the acceptability factor. The review was done based on five key factors as follows -

- Uniqueness
- Storytelling ideas
- Readability
- Aesthetic appeal and
- Childishness.

The users provided feedback on how easy it was to read, how it felt emotionally, and how it could be used in creative work.

#### **4.8 Results and analysis**

Based on the user survey it was found that most people liked the fonts and gave affirmative feedback on the questions asked around the key factors. Teachers thought these fonts could help young kids get more interested in reading and writing. Designers saw them as useful for branding children's products.

The study found that children's handwriting changes with age, skills, and personal style. Younger kids (4-5 years old) wrote bigger and less neatly, while older kids (6-8 years old) had more structured and consistent handwriting. The final font kept the playful look of children's writing but was still clear enough to use in different settings.

### **5. Discussion**

This study explores the connection between children's handwriting, emotions, and creativity. By observing how kids naturally write and tell stories, we gain insight into how writing supports their thinking and emotional expression. Handwriting is more than just a skill—it serves as a personal and imaginative form of communication. When children develop their own writing styles and turn them into fonts, they bring their ideas to life. This process enhances self-expression, organization, and language skills while making writing enjoyable. The study also highlights the importance of learning through play, which makes writing more engaging and meaningful. Each child's handwriting reflects their personality, background, and developmental stage. Some children write with fluid, artistic strokes, while others prefer structured, precise letters. Analyzing these styles helps educators and psychologists better understand a child's growth and emotions.

Transforming children's handwriting into fonts has practical applications in education and

business. These fonts can enhance learning materials, children's books, and digital content. Businesses can also use them in advertising and packaging to evoke warmth and nostalgia. Additionally, digital tools can preserve and enhance children's handwriting, allowing them to see their creativity come to life in new ways and ensuring their unique writing styles remain relevant in real-world applications.

## **6. Conclusion**

This research explores the connection between children's handwriting, emotions, and thought processes. By studying how kids naturally write and tell stories, we examined how typography can be both engaging and beneficial for early learning. Our experiment transformed children's handwriting into digital fonts, preserving their unique styles while enhancing child-friendly typography. A key finding is that this approach bridges creativity with real-world design. The custom fonts not only improve reading experiences but also foster a stronger emotional connection to learning. Additionally, the study highlights how storytelling helps children express emotions and develop their thinking skills. However, challenges arose. Since each child writes differently, maintaining readability while preserving natural handwriting was difficult. The study also focused on children aged 4-8, limiting its generalizability. Future research could include older children and refine digital tools for font creation. These findings could benefit education, marketing, and accessibility, particularly for children with reading difficulties like dyslexia.

## **Acknowledgement**

During writing of this article, AI tool ChatGPT was used for improving the language quality and correcting grammatical errors only.

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