Problem Brief

**Topic:** Teaching Cursive Handwriting

**Problem:** Cursive writing is no longer required in school curriculums. Not only will this affect children’s learning development, it will mean that as these children grow up, less and less people will be able to read or write in cursive. They won’t even know how to sign their names. Before the digital age, everything was written in script. Historical documents, letters from distant relatives will not be able to be interpreted. It is a dying language in a sense. It is extremely important for children to learn to write in cursive during the years when their brain is rapidly developing. If they can’t learn this in school, there must be another outlet to teach them.

**Background:** Cursive handwriting is extremely important for developing reading and writing skills of young children. It helps teach reading comprehension, letter recognition, and penmanship, all of which improve a child’s ability to develop writing compositions. Writing in cursive causes a child to focus on movement, sensation and thinking all at once, activating the parts of the brain associated with language, cognition, memory and function. It helps children slow down to digest information and reframe it in a way that makes sense to them. In doing so, children are able to retain and recall the information they are writing about. Cursive writing aids children with reading and writing disabilities as well attention deficit disorders. Developing kinesthetic skills improves motor skills for those with dysgraphia. The fluidity and connections between letters helps children with dyslexia because they are not as likely to flip or invert letters. The grounding and sensory integration improves a child’s focus and calms overactive minds. Writing in cursive also promotes creativity in children. They are able to develop their own style and personality through their writing. Taking ownership in their writing abilities is in direct correlation with boosting their self-esteem. Being creative also helps a child generate more ideas which helps with developing writing compositions.

**User Group:** Children ages 7-10 that don’t know cursive or are at a beginner level and wish to learn. These children are goal-oriented and driven by rewards and positive reinforcement. They like to collect prizes to show proof of their achievements. They are hands-on learners and need clear and simple instructions. They like interaction and motion. They respond to bright colors, animated illustrations and bold typography. They like creating characters and developing their own personas. They thrive on competition, games and challenges. Clutter and too much text are overwhelming. Pictures are more appealing to them and communicate the message more effectively. They like options but need to be guided.

**Primary Goals:** Teaching children how to read, write, and understand cursive. Helping children learn to write letters, words and eventually full sentences on their own.

**Secondary Goals:**
- Improved motor skills - hand movement control, clear speech
- Reading comprehension and increased understanding, memory and recall
- Faster reading and writing abilities
- Learning to organize thoughts and strategize
- Good penmanship and note-taking skills
Problem Brief

- Creativity and idea generation
- Boosting self esteem and personal style

Plan of Action:
Create an app that can be used on an iPad or computer (with writing pad connected) to teach children how to read and write in cursive.
- Create a game course that progressively becomes more difficult
- Fun games and challenges throughout the course
- Everything is task oriented with some sort of ending goal
- Children create a character for themselves that will be with them every step of the way
- Constructive and positive feedback given
- Points and rewards given
- Children can see their progress as they move through levels
- Motion and animation used when transitioning between stages and tasks
- “Practice” section separate from game course
- Minimal text on the screen
- Mostly interactive/audio
Cursive handwriting is in danger because:

- It affects children aged 5-12
- It improves reading and writing abilities

Concept Map

**CURSIVE HANDWRITING**

**Improves**

- Reading comprehension
- Writing fluency
- Memory retention
- Executive function

**Affects**

- Children aged 5-12

**Reading**

- Vocabulary
- Comprehension
- Fluency
- Metacognition

**Writing**

- Grammar
- Punctuation
- Organization
- Writing process

**Concept Map**

- Relationships between reading and handwriting
- Relationships between writing and handwriting

---

[Diagram showing connections between reading, writing, and cursive handwriting]
CURSIVE HANDWRITING

Improves children ages 5-12 because:

- Teaches reading and understanding
- Improves processing capabilities
- Teaches historical documents
- Hand-writes letters

Affects reading and writing:

- Letter recognition
- Composition quality
- Penmanship

Increases:
- Language fluency
- Organization and strategy
- Paragraph writing
- Handwriting

Children ages 5-12
CURSIVE HANDWRITING

improves

LEARNING ABILITY
- Digging Information
  - Enhances understanding of information
  - Increases retention and recall

COGNITIVE THINKING
- Integrating Knowledge
  - Integrates visual & tactile info
  - Improves neural diversity

FOCUS
- Reduces classroom distractions
- Improves executive skills
- Helps children with ADHD
  - Enhances ability to concentrate

CREATIVITY
- Generates new ideas quickly
- Improves self-esteem
- Infuses creativity into daily life

is in danger because:

- Typing: Old-fashioned way of writing, no longer taught in schools
- Common Core Standards: Writing is no longer required in the school curriculum

affects children ages 5-12
Persona: Davis, User Group: Children ages 7-10

Davis is a 7-year old boy just starting 2nd grade. He has a low reading level for someone his age because he struggles with pronunciation and letter recognition. Recognizing letters helps for spelling and sentence structure. He does better when the words on the page are big rather than small print. His reading is in direct relation with his writing abilities. The sharp angles, separate letters, and straight lines of writing in print are difficult for Davis, so he lacks confidence in his writing abilities. Part of the problem for him is keeping the pencil steady. Positive reinforcement from teachers helps Davis stay motivated to keep trying. Davis is an extremely active child that is constantly moving and easily distracted. His lack of focus is also a contributing factor to his poor handwriting.

Davis excels in art class. He loves to finger paint and build crafts with his hands. He uses bright colors and paints pictures of animals and his family. When he gets good grades on his projects he gets a sticker with some sort of inspirational or congratulatory phrase. He collects all the stickers he receives. Davis understands better when instructions are very simple and clear. He is a hands on and visual learner, so demonstrations are the most effective way for him to learn. He lacks organizational skills, so information must be organized for him.

Davis plays games on his mom’s ipad. He likes games where he gets to press buttons and interact with characters on the screen. His favorite game is Racing Penguin because he controls the penguin’s speed and jumping as it races through engaging illustrative scenes that change from level to level. Davis has a very competitive nature due to his two older brothers. He likes the challenges the game presents. He tries to get a new high score every time he plays. He is driven by improvement and rewards.
Wireframes

Home Screen

Cursive Crunch
Welcome back Curtis!

Practice   PLAY

Player Profiles

Who’s Playing?
Curtis   Bella   Darian   Raj
Tricia   Steven

Add a Player

Name: |
Age: Grade:
Reading Level: 0 1 2 3 4 5
Writing Level: 0 1 2 3 4 5

Player Info

Choose your Character:

Choose Character

Cancel   Save
Practice Mode - lowercase, guides, lines

Practice Mode - uppercase, guides, lines

Practice Mode - uppercase, guides, no lines

Practice Mode - change letter
Wireframes

Play Mode Map

Game Instructions

Game Round 1

Game Completed
Style Tiles

Style Tile Version 1
- animated, youthful, fun, playful, exciting, adventurous, themed

Style Tile Version 2
- vector, flat, clean, social, universal, friendly, bright

Header
- Subhead
- Instructions and Feedback
- smaller copy and feedback

Button styles
- background illustration style
Illustration Style
Great job!

Choose Your Character
Interface Revisions
Add a Player

Name: Ali Fadorsen
Age: 8  Grade: Second
Reading Level: 0 1 2 3 4 5
Writing Level: 0 1 2 3 4 5

Add a Player

Name: Ali Fadorsen
Age: 9  Grade: Third

Add a Player

Version 2

Version 2

Final Version

Final Version

Welcome Camper Ali!

Welcome back Ali!

Practice  Play

Practice  Play
Interface Revision

Practice Mode - Single Letter

Version 1

Version 2

Final Version

Final Version

Follow the Curve
Practice Mode - Word (with and without guides)

Version 2

Final Version
Interface Revision

Version 1

Final Version
Exercise 1-3

Drag and drop the print letters to match the cursive letters. You've got 10 seconds per round!

Show me

Got it

How to Play: Drag and drop the print letters to match the cursive letters. You've got 10 seconds per round!

Version 1

Version 2

Final Version
Great job!

Version 1

Version 2

Final Version
Final Interfaces
Final Interfaces

Loading Screen

Who's Playing

Add a Player

Choose Your Character
Final Interfaces

Map View

Game 1-5

Correct Answer

Game Completion
Final Interfaces

- Practice Mode - single letter with guides

- Character Feedback (no touch mode)

- Character Demo (no touch mode)

- Lowercase Word - no guides (starting with “c”)