

# CRPL For Typing and Reading Comprehension

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**EDUC 846: *Personalized & Adaptive Learning***

# Proposal (@ session 11) → Rationale (@14)

In 2024, the Nation's report card showed a decline in reading for 4th graders. These scores were like the reading scores in the early 1990s, with the decline being driven by lower-performing students across all grades and subjects. This has led to a widening academic gap between students (NAGB, 2025). The problem that the nation is facing is more than just a simple reading score, these scores could be detrimental to the future of the country. By integrating a simple typing program into elementary education, students can get a head start in writing, increasing their reading comprehension capabilities, typing speeds, and test scores.

Currently, language arts are being taught inefficiently, with some students far behind on reading than others. Just one teacher is not enough to monitor every student, there is not enough time. By combining keyboarding, the future of literacy in education can change. Students already learn how to type in 5<sup>th</sup> grade, gaining technical skills for workforce, improve sight-reading skills, and reinforce literacy skills (Cicerchia, n.d.). By incorporating Culturally Responsive Personalized Learning (CRPL) into this program, students will gain more interest in reading and writing, while already learning typing skills. CRPL considers the social, cultural, and linguistic contexts for learning, able to adapt in many ways. (Ober, 2023)

This program is a three-session cycle that considers every 5th grader an “expert” while building typing proficiency and reading comprehension through CRPL. The sessions include writing, typing, and assessment. For writing, students choose from five prompts to write a “guide” on something they know (game, skill, cultural practice, or familiar place). This ensures every student can write from their own experiences. For typing, students are paired up to type each other's guides. They are required to type stories exactly as written, including home language and cultural terms, honoring diverse experiences. Finally, for assessment, students complete reading comprehension quizzes on their partner's story, participate in a gallery walk, and the chance to move up on a typing leaderboard. This cycle should be repeated monthly with different literacy focuses, building literacy skills while creating a classroom culture where cultural difference is celebrated.

The task loop that is implemented in this program is when students complete a full cycle of writing, typing, reading, and assessing before beginning again with increased difficulty. Each monthly exercise introduces new objectives while maintaining the CRPL framework. This structure ensures mastery through repeated practice across diverse content. Within each task loop, step loops provide immediate feedback. For the writing step loop, students draft, receive feedback, revise, apply corrections, and draft again, building application of the unit through practice. For the typing step loop, students read peer text, type a section, check accuracy, correct errors, type the next section and repeat. This repetition builds muscle memory on the keyboard while reinforcing attention to detail. For the reading step loop, students read a typed story, answer comprehension questions, review text for evidence, revise answer, and move on to the next question. Each cycle emphasizes engagement in text and comprehension.

# Logic Model

## Problem Statement

Reading comprehension, writing skills, and typing skills have gone decreased compared to past years.

## Theoretical framework & evidence that suggests promise of a PL-based solution

Culturally Responsive Personalized Learning would grab the interest of students, making writing, reading, and typing enjoyable.

Input(s)	Task Design Details & Output of the PL Enactments	Immediate Outcome(s)	Long-term outcome(s)	Impacts
<ul style="list-style-type: none"><li>• Human Resources (teachers, instructional tech. specialists, program admin, IT support, consultants for exceptional children)</li><li>• Technology (keyboards, laptops)</li><li>• Time (teacher planning and prep, development time)</li><li>• Data and Assessment tools</li></ul>	<ul style="list-style-type: none"><li>• Mastery-based progression</li><li>• Immediate, real-time feedback (WPM tracking, drills, instant error highlight)</li><li>• Interest-based and Culturally Responsive (content matches student interest, reflects backgrounds while exposure to unfamiliar perspectives)</li><li>• Performance data: typing metrics, reading comprehension score, writing quality (accuracy rates, vocab)</li><li>• Student portfolios with original curated documents, showing growth</li><li>• Leaderboard creating friendly competition increasing motivation</li></ul>	<ul style="list-style-type: none"><li>• Interest in typing and writing</li><li>• Increased engagement</li><li>• Student equity and easier lesson plans</li><li>• Increased typing speed and accuracy</li><li>• Deeper engagement</li></ul>	<ul style="list-style-type: none"><li>• Increased test scores</li><li>• Better reading comprehension</li><li>• Faster typing speeds</li><li>• Less use of supplemental materials for education (AI)</li><li>• Workforce readiness</li><li>• Reduce achievement gap</li></ul>	<ul style="list-style-type: none"><li>• Educational equity as achievement gap narrows</li><li>• Stronger self-efficacy and academic identity</li><li>• School culture focused on PL</li><li>• Stronger classroom communities</li><li>• Reverse declining literacy trends</li><li>• Increased civic participation</li></ul>

# Classic Instructional Design (Schema of the Base Design)

Learning Objectives	Learning Activities	Learning Outcomes Assessed
<ul style="list-style-type: none"> <li>• <b>Develop Literacy Skills Through Authentic Writing:</b> Students will write clear, sequential and instructional texts that demonstrate mastery of grade-level appropriate grammar and mechanics while building typing proficiency.</li> <li>• <b>Practice Cultural Responsiveness and Collaborative Learning:</b> Students will honor diverse experiences, work effectively with a variety of partners, and build a classroom community where all expertise is valued.</li> <li>• <b>Increase Reading Comprehension Across Diverse Texts:</b> Students will demonstrate a deep understanding of peer-written texts through analysis, including content from unfamiliar cultural contexts.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Expert Guide Writing Choice:</b> Students select from five culturally responsive prompts and spend 20 minutes writing a “guide” that teaches their expertise. The writing will follow required unit elements for the month.</li> <li>• <i>Sample Prompt:</i> “You are an expert guide. Choose 1 of these 5 topics to write about (skill, favorite place, a game, cultural knowledge, language) and apply what we are learning about in English (unit lesson).</li> <li>• <b>Cultural Typing Exchange:</b> Students exchange guides with partners, type it exactly as written, including home language words, and write respectful questions on sticky notes. Students complete typing with accuracy checks between paragraphs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reading Comp. Assessment:</b> Students complete a comprehension quiz on the expert guide they typed (peer story). Questions assess main idea, authors purpose, sequence, vocabulary, cultural understanding, and making connections.</li> <li>• <b>Real-time performance tracking (WPM, Accuracy, errors)</b></li> <li>• <b>End-of-Unit Task:</b> Students independently write, type, and complete comprehension assessment</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Build Awareness and Self-Directed Learning:</b> Students will track personal progress, set achievable goals, reflect on learning processes, and demonstrate a growth mindset across both literacy and typing skills.</li> <li>• <b>Apply CRPL Principles:</b> Students will engage with a culturally affirming curriculum that adapts to individual needs while building workforce-ready skills for long-term success.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reflective Gallery Walk:</b> Students participate in a gallery walk viewing other expert guides displayed around the classroom. They will leave sticky note comments on peer work, while updating personal notebooks with their data (typing speed, accuracy, comprehension score). This concludes with a whole-class reflection on the diversity of the classroom.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Digital Portfolio:</b> Student work samples reflect writing and visualizes growth</li> <li>• <b>Peer Collaboration:</b> Teachers observe collaboration quality and feedback (formal evaluation at end of unit, observations throughout)</li> </ul>

# Classic Instructional Design (Base Design)

## User-facing instructions/objectives page

By the end of this program, you will:

**Write clear instructions** that teach others your expertise

**Type faster and more accurately** on a keyboard

**Read and understand** stories from classmates with different backgrounds

**Track your progress** and set goals to improve

**Share your culture** and learn from others

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### How It Works

Every Month, You'll Complete 4 Activities:

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#### ACTIVITY 1: Write Your Expert Guide (Week 1)

**Time:** 20 minutes of writing

**Remember:** Everyone is an expert at something. Your story matters!

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#### ACTIVITY 2: Type Your Partner's Story (Week 2)

**Time:** 25 minutes of typing

**Remember:** You're honoring your partner's knowledge by typing their words carefully.

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#### ACTIVITY 3: Read and Answer Questions (Week 3)

**Time:** 15 minutes

**Remember:** You should be able to answer questions based on what your partner wrote, even if the topic is new to you.

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#### ACTIVITY 4: Celebrate and Track Progress (Week 3)

**Time:** 20 minutes

**Remember:** Compare yourself to YOUR past scores, not to other students. Everyone improves at their own pace!

## Details

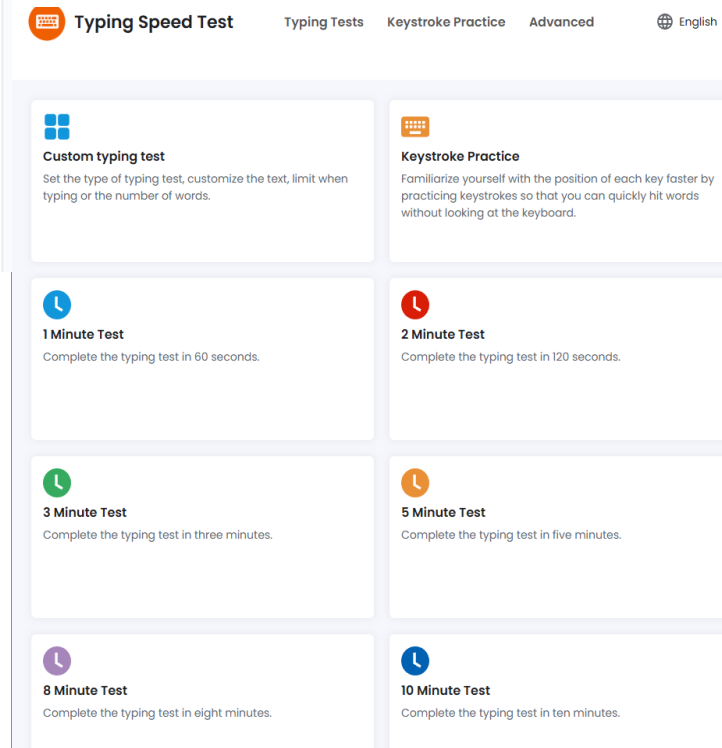
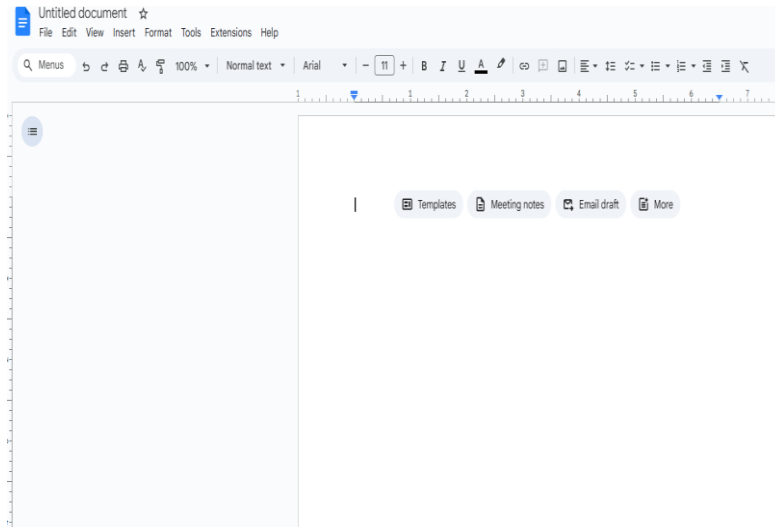
- The learning objectives and instructions page is straight forward, with users (students) being shown the objectives to be reached and the instructions for activities.

# Classic Instructional Design (Base Design)

## User-facing materials

## Details

- Students will need a laptop to complete the exercises for both typing and writing. Using a simple platform like Google Docs, which can be easily integrated into Chromebooks. Once writing exercises are done and peer reviewed, the instructor will input the story into a “custom typing test,” allowing for students to practice typing using their peer’s story.



# Classic Instructional Design (Base Design)

## User-facing assessment activity

### Reading comp. Assessment

After reading the story your PEER made, answer these questions

\* Indicates required question

What prompt did your partner choose? \*

Your answer

According to this guide, what should you do FIRST? \*

Your answer

What materials do you need to follow this guide? \*

Your answer

Why does the author think this skill/activity is important? \*

Your answer

Test your typing speed in two minutes

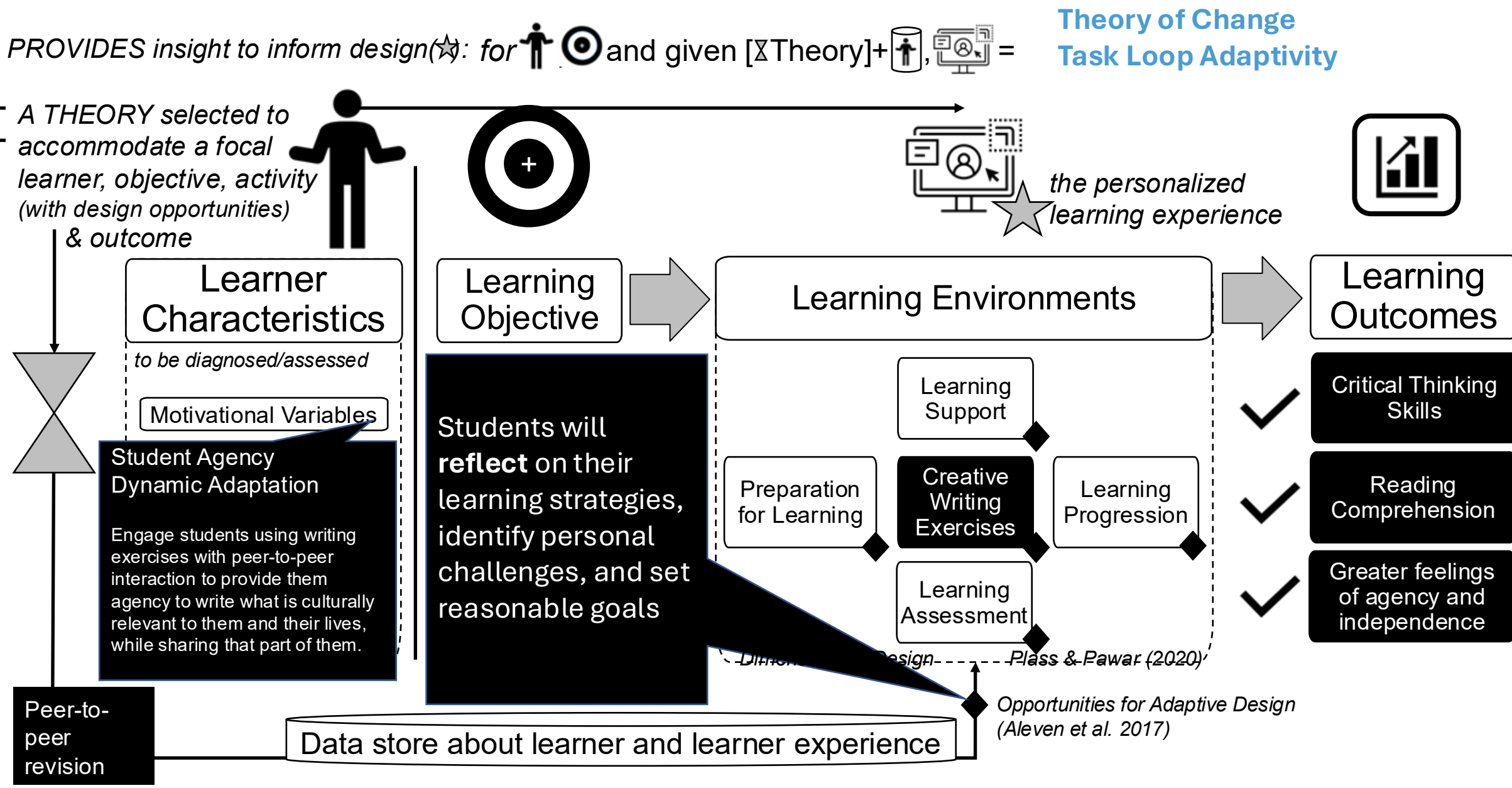
02:00  Advanced

Keyboard sounds

Lights were shining from every window, and there was a savory smell of roast goose, for it was New-year's eve-yes, she remembered that. In a corner, between two houses, one of which projected beyond the other, she

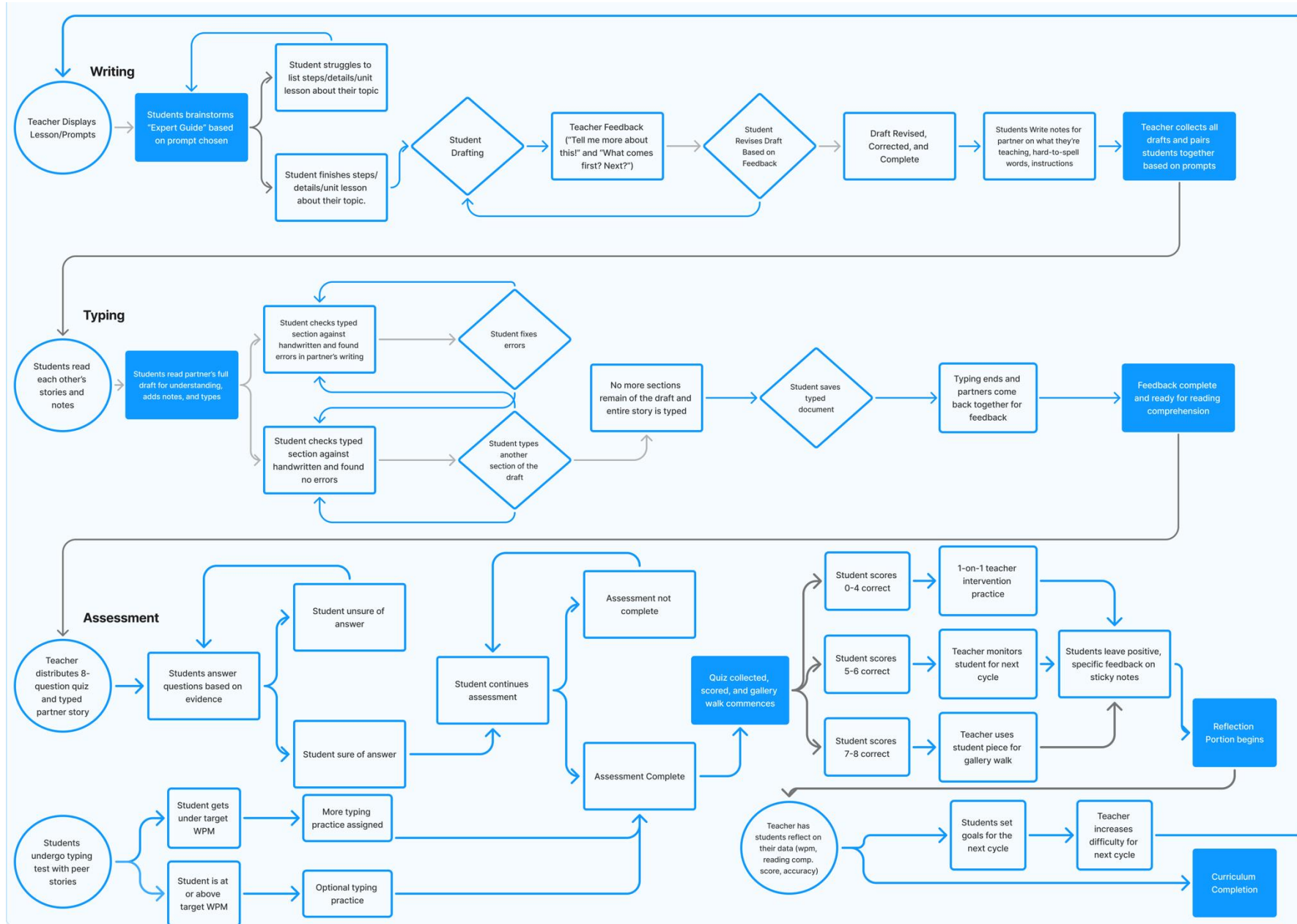
## Details

- Assessment activities will include a quiz to test for reading comprehension of peer stories and a custom typing assessment with those stories. Assessments will gradually become longer typing tests at the end of the unit



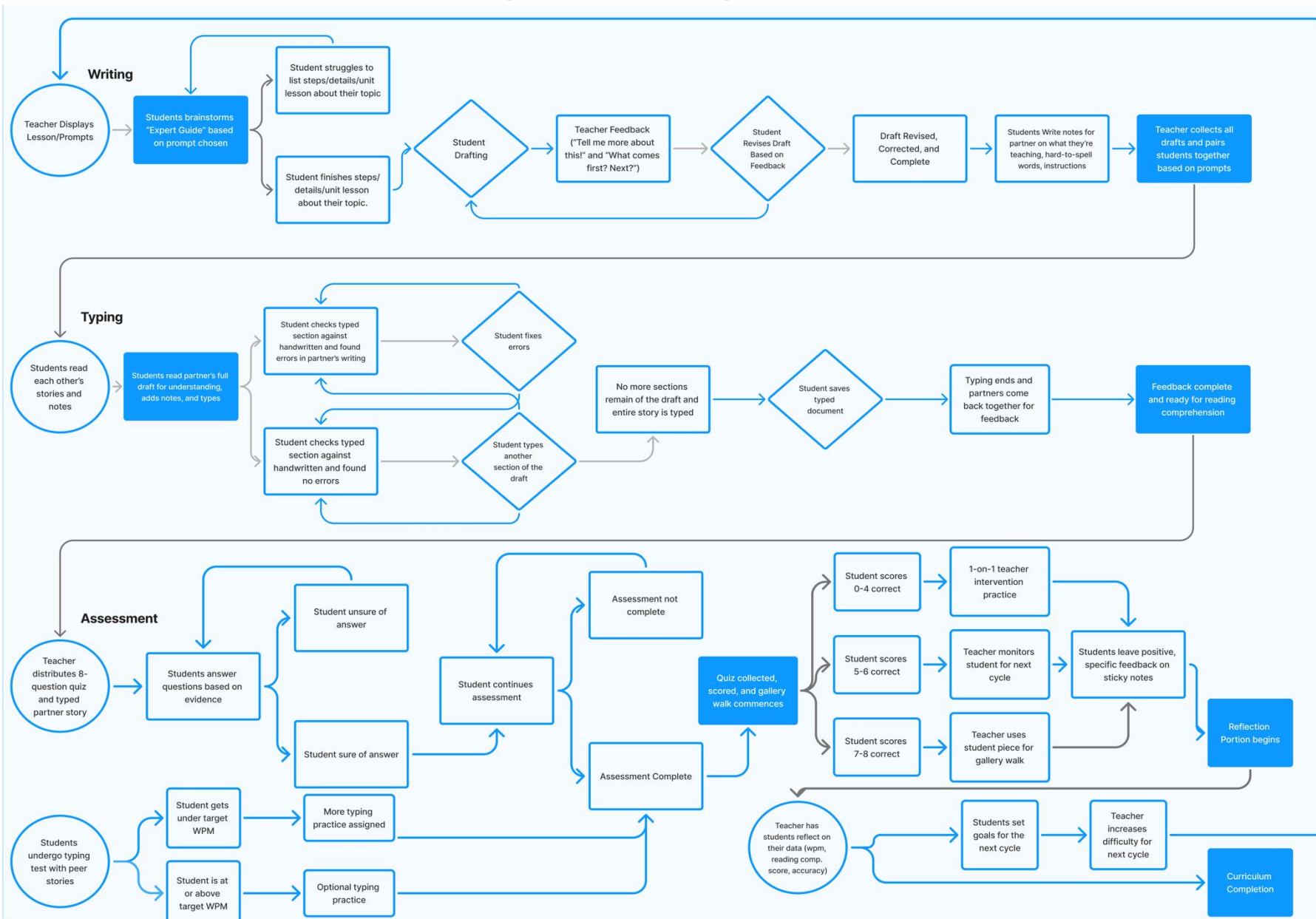
*DICTATES infrastructure, real-time engineering + interpretation needed to inform & enact theory-driven personalization*

# Full PL Design Logic TASK LOOP



- If the previous “segment” is complete, then move on to the next “segment”
- If the cycle has been completed once, then increase writing requirements, raise typing WPM targets, and implement for the next cycle.

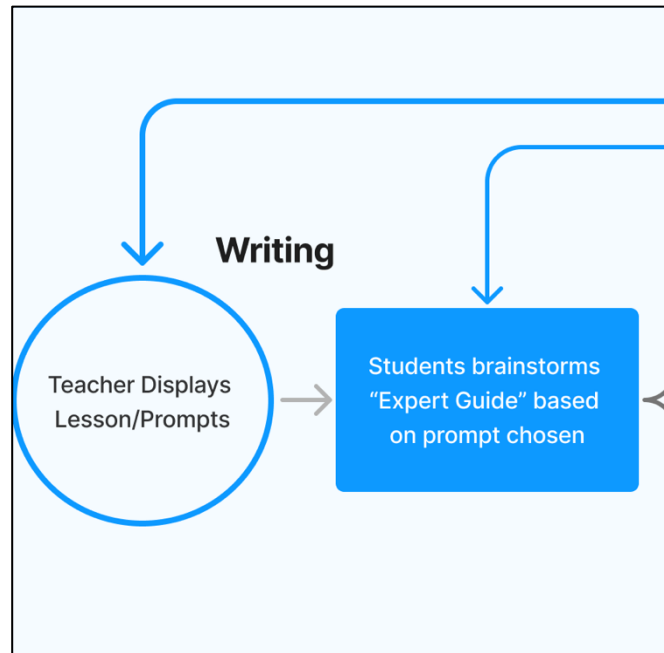
# Full PL Design Logic STEP LOOP



- **Writing:**
  - If the student struggles to list steps or complete topic, **then** they return to brainstorming.
  - If the student revises their draft after feedback, **then** they keep drafting until completion.
- **Typing:**
  - If the student finds errors in peer writing, **then** they fix the errors.
  - If the student fixes the errors and finds no more, **then** the student types another section of the draft until the entire story is typed.
- **Assessment:**
  - If the student is unsure of their assessment answer, **then** they find evidence to support it.
  - If the student is sure of their answer, **then** they continue until completion.
  - If the student scores 5-6 correct, **then** the teacher monitors the student for the next cycle.
  - If the student scores 7-8 correct, **then** the teacher uses their piece for the gallery walk.
  - If the student is below the target WPM for the cycle, **then** the student has mandatory typing practice.
  - If the student is at or above target WPM for the cycle, **then** the student has optional practice, and assessment is complete.
  - If there is another cycle, **then** the teacher reviews and increases the difficulty for the next cycle (higher WPM expectation, more complicated reading comp. questions, prompts).
  - If there isn't another cycle, **then** the curriculum has completed.

# Task Loop PL Design Flow & User Experience

## PL Design Logic view (back end)



- This is the beginning task for writing.

## User Experience (screen view)

The screenshot shows a writing prompt screen with a yellow background and a white central area. The text reads: "You are an expert! Pick **one** of these topics to write about using 'your, you're, their, there, and they're'". Below this is a list of prompts:

- You are an expert in:
  - A skill you have
  - A game you play
  - Your favorite place
  - Your language
  - Your own cultural knowledge
- Write 2 paragraphs (MINIMUM 5 sentences), and turn it in

- Teachers will display the unit prompts, directions, and target lesson goals for the writing activity on a standard presentation.



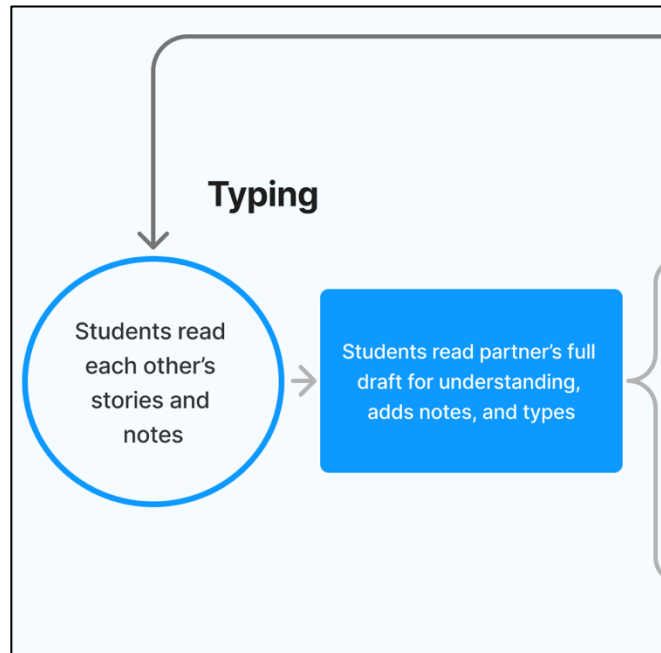
The screenshot shows a student's handwritten brainstorm on a white background. The text reads: "Topic: Favorite Place" and "Brainstorm:" followed by a list of prompts:

- Restaurant
- Local
- The family goes all the time
- Best memories

- Students will then brainstorm their "expert guide" on paper first, to guide handwriting. On physical paper, it will look like this.

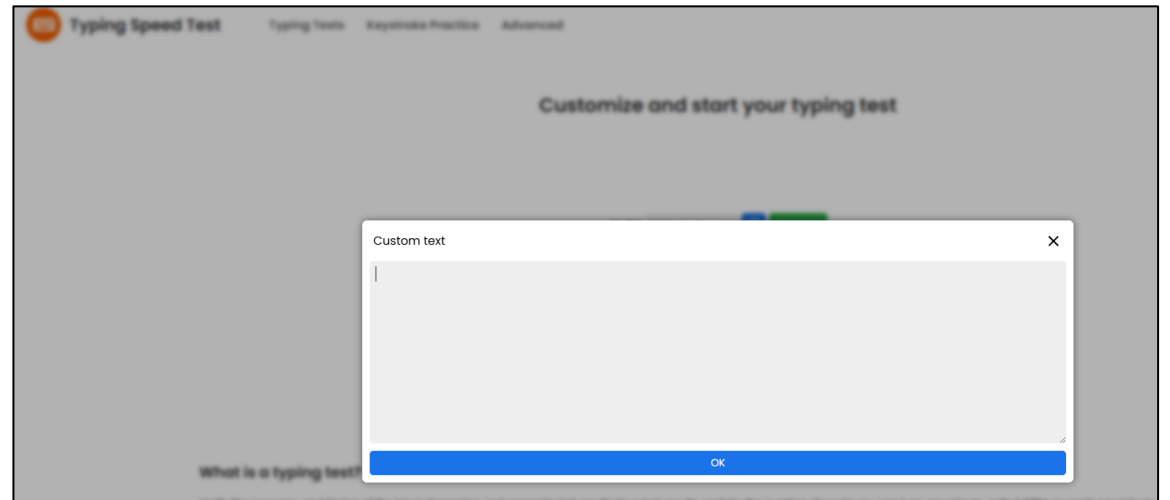
# Task Loop PL Design Flow & User Experience

## PL Design Logic view (back end)



- This is the beginning task for typing

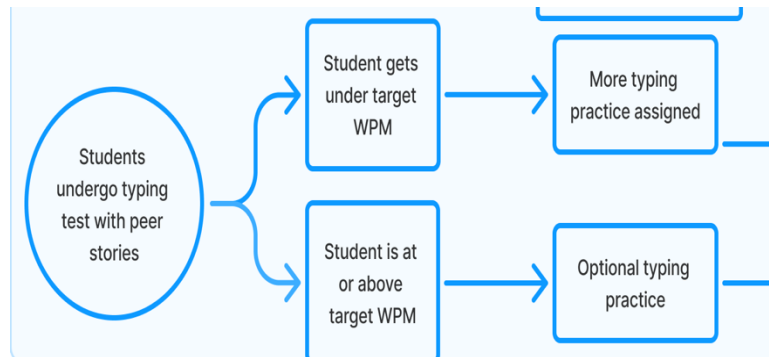
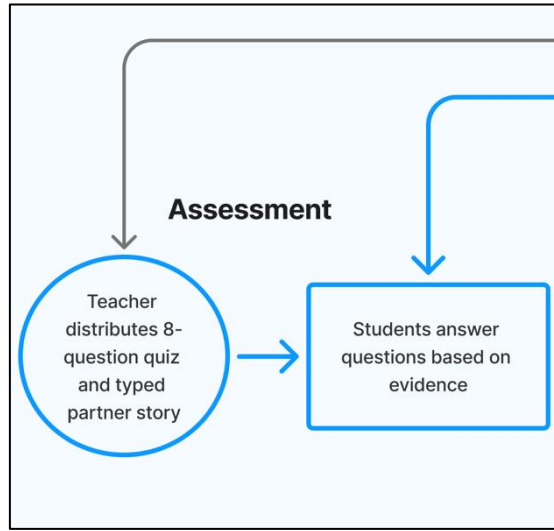
## User Experience (screen view)



- Students will type their partners expert guide on their Google doc and then insert it into a “custom text” option for their typing assessment.

# Task Loop PL Design Flow & User Experience

## PL Design Logic view (back end)



- This is the assessment portion of our task loop (both typing and reading comprehension)

## User Experience (screen view)

The screenshot shows a reading comprehension assessment interface. The title is "Reading comp. Assessment". Below the title, it says "After reading the story your PEER made, answer these questions". There are five questions, each with a "Your answer" input field. The questions are: "What prompt did your partner choose?", "According to this guide, what should you do FIRST?", "What materials do you need to follow this guide?", and "Why does the author think this skill/activity is important?".

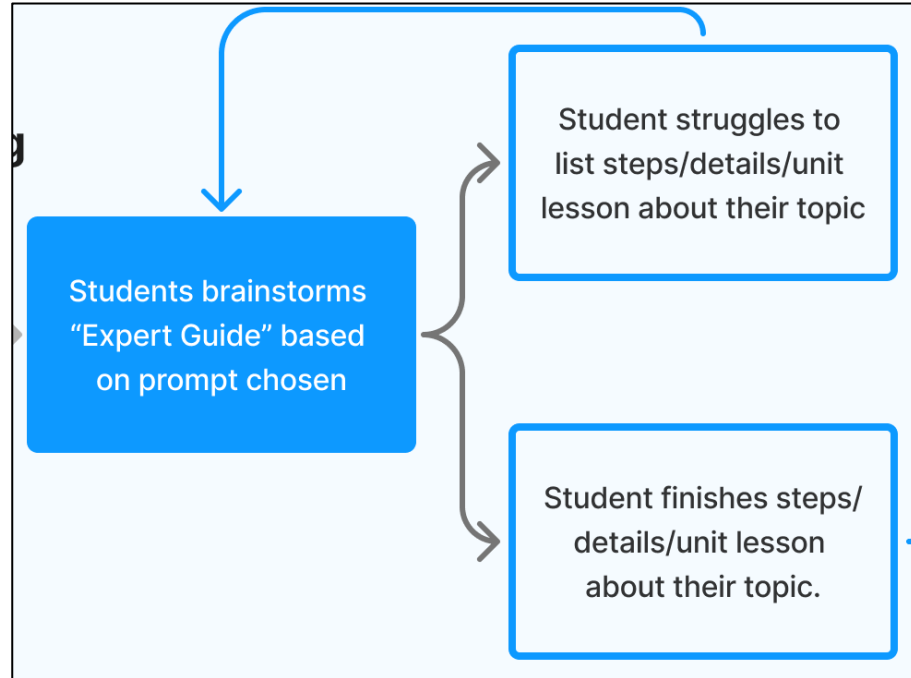
The screenshot shows a reading comprehension assessment interface. The title is "Reading comp. Assessment". Below the title, it says "After reading the story your PEER made, answer these questions". There are five questions, each with a "Your answer" input field. The questions are: "Why does the author think this skill/activity is important?", "Where did your partner show the unit's lessons in their writing?", "What did you learn about your partner (their life, family, or community)?", "If you tried following this guide, what would be challenging for you? Why?", and "Have you done something similar to this guide? How is it the same or different?".

The screenshot shows a typing speed test interface. The title is "Typing Speed Test". Below the title, it says "Remember the position of each key to speed up typing." There is a timer showing "01:00" and a "Minute Test" button. Below the timer, there is a paragraph of text: "It is a great mistake to think that there are no fairies in Italy, and one of the nicest is called La Befana, and she belongs to Christmas just like the holly and mistletoe and". Below the text, there is a keyboard graphic.

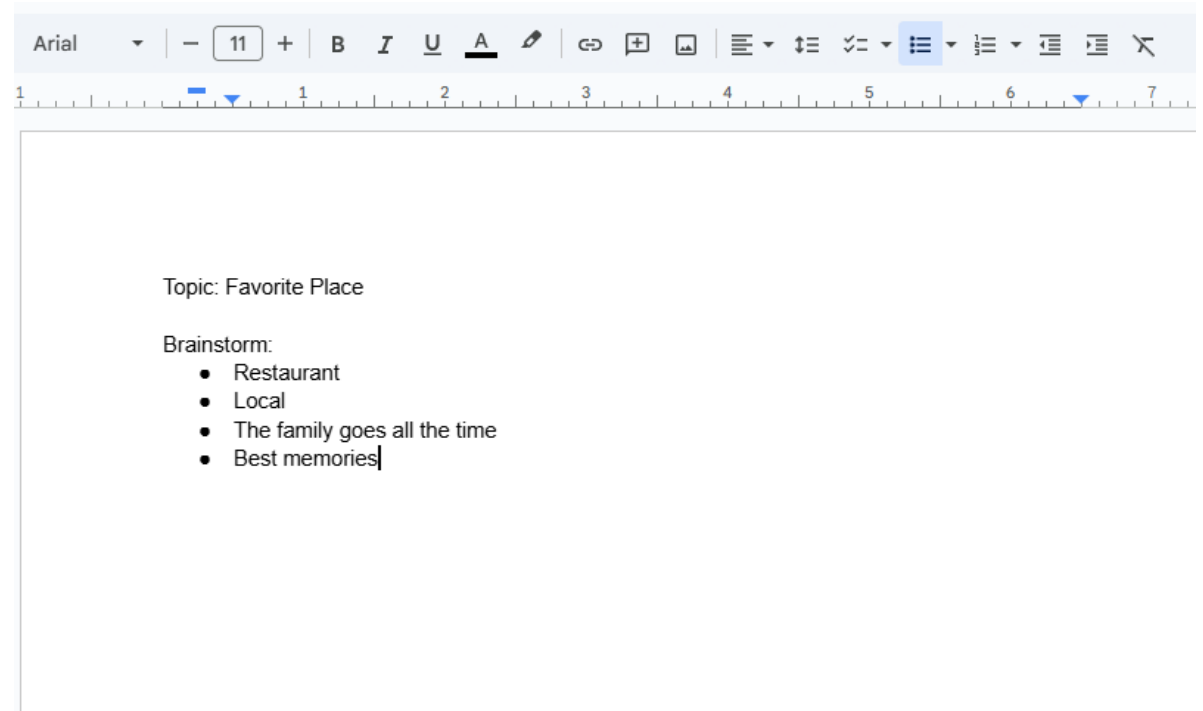
- Students will take an 8-question reading comprehension assessment that are all open response. For the typing assessment, students will type their custom typing test from the typing task and type it. Depending on results, students might have to practice their typing skills more.

# Step Loop PL Design Flow & User Experience (Writing)

## PL Design Logic view (back end)



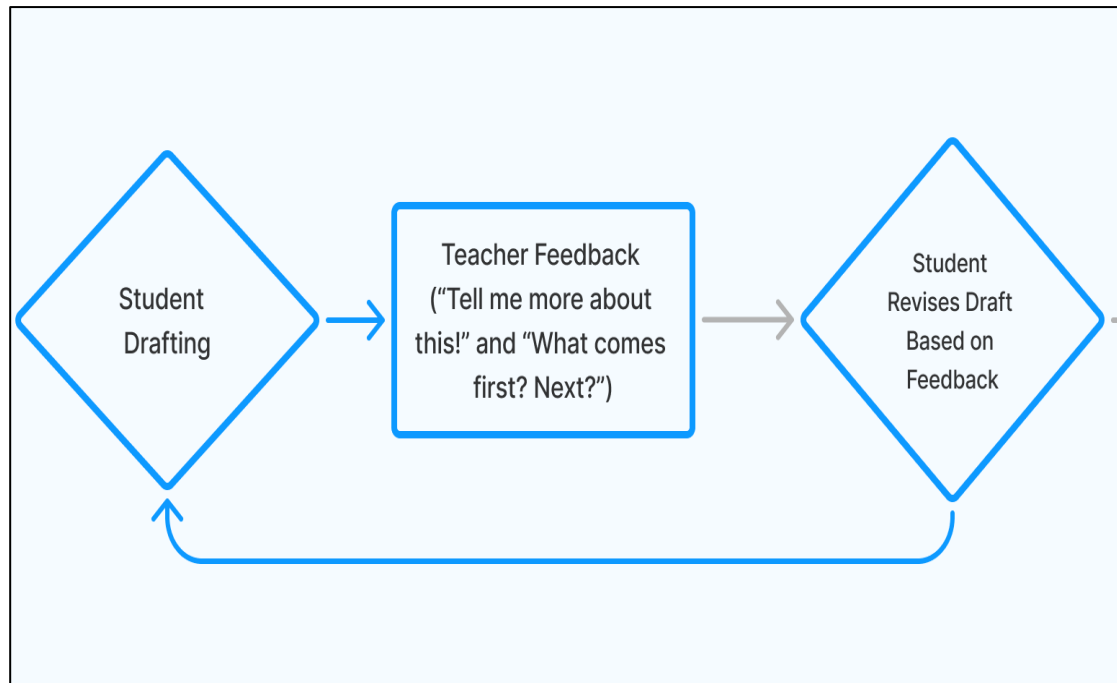
## User Experience (screen view)



For this step, if a student struggles to find prompt writing ideas, then they will return to brainstorming or choosing another prompt. This will be done handwritten on paper, but the screencap of the Google Doc on the right will be what it looks like.

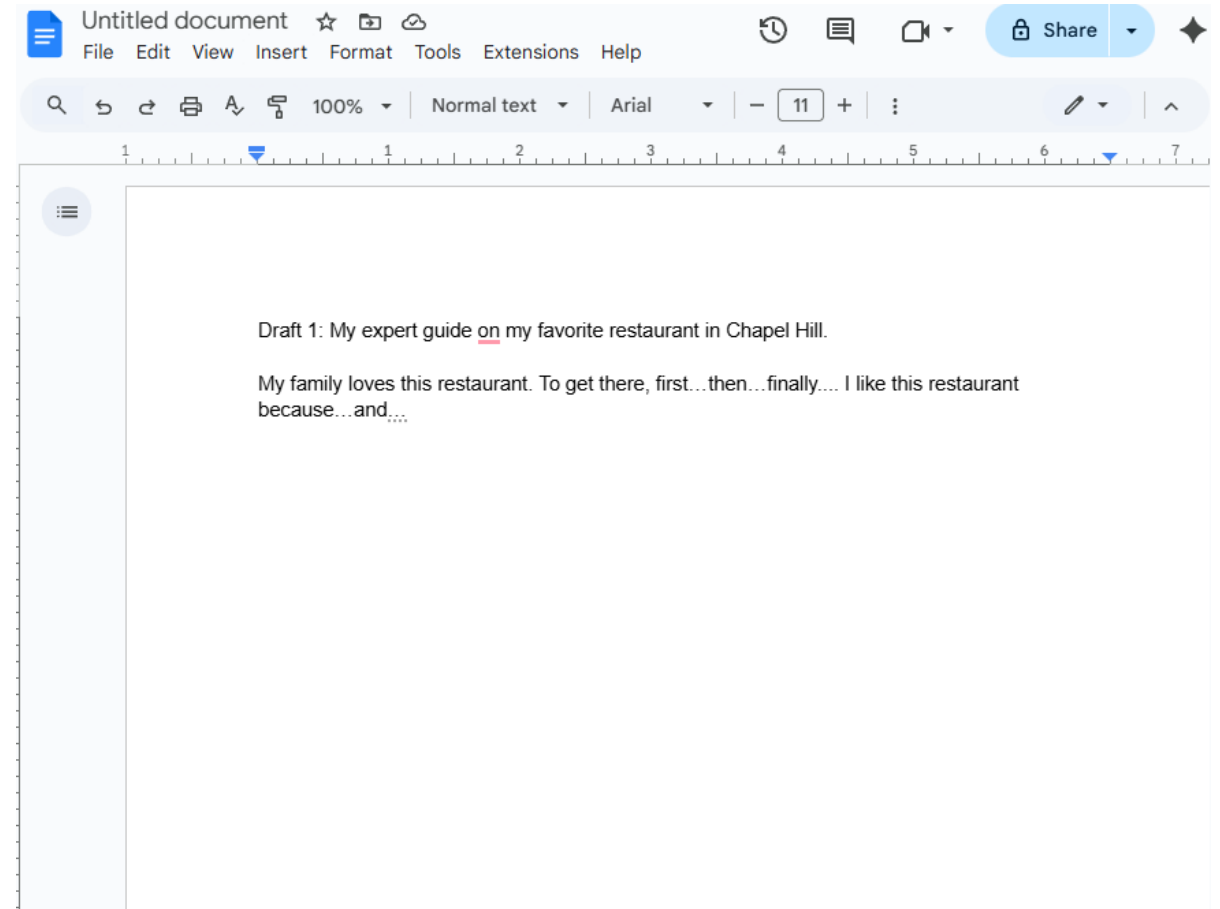
# Step Loop PL Design Flow & User Experience (Writing)

## PL Design Logic view (back end)



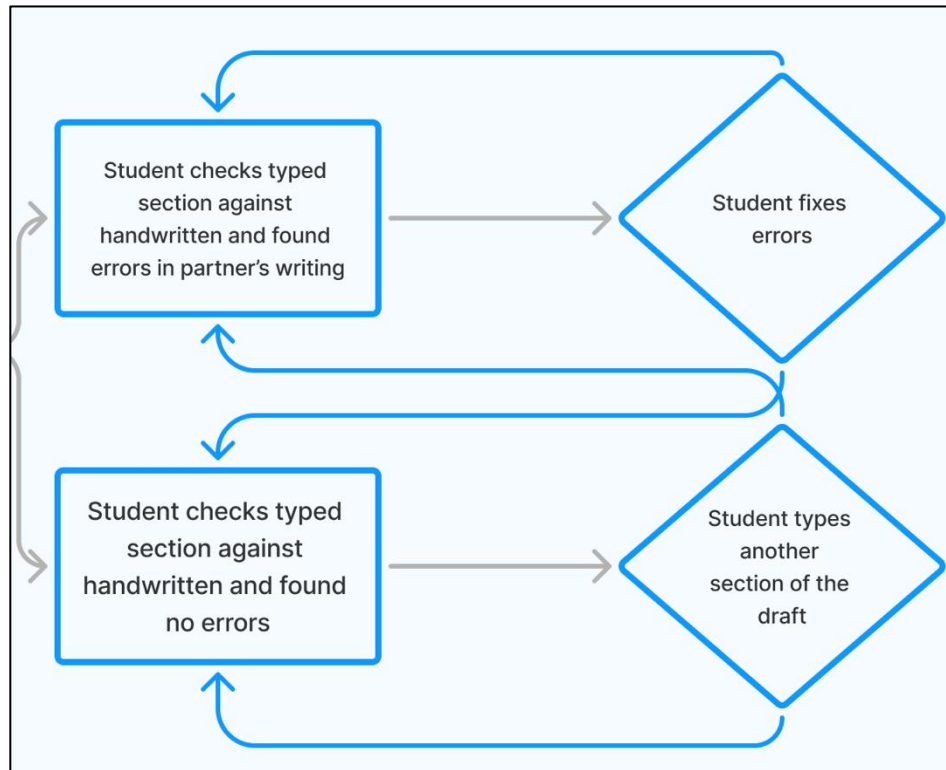
Students will draft their expert guides and revise based on teacher feedback provided until the draft is complete. This will all be done on physical paper, but the Google Doc screencap on the right shows how it will look to the student.

## User Experience (screen view)

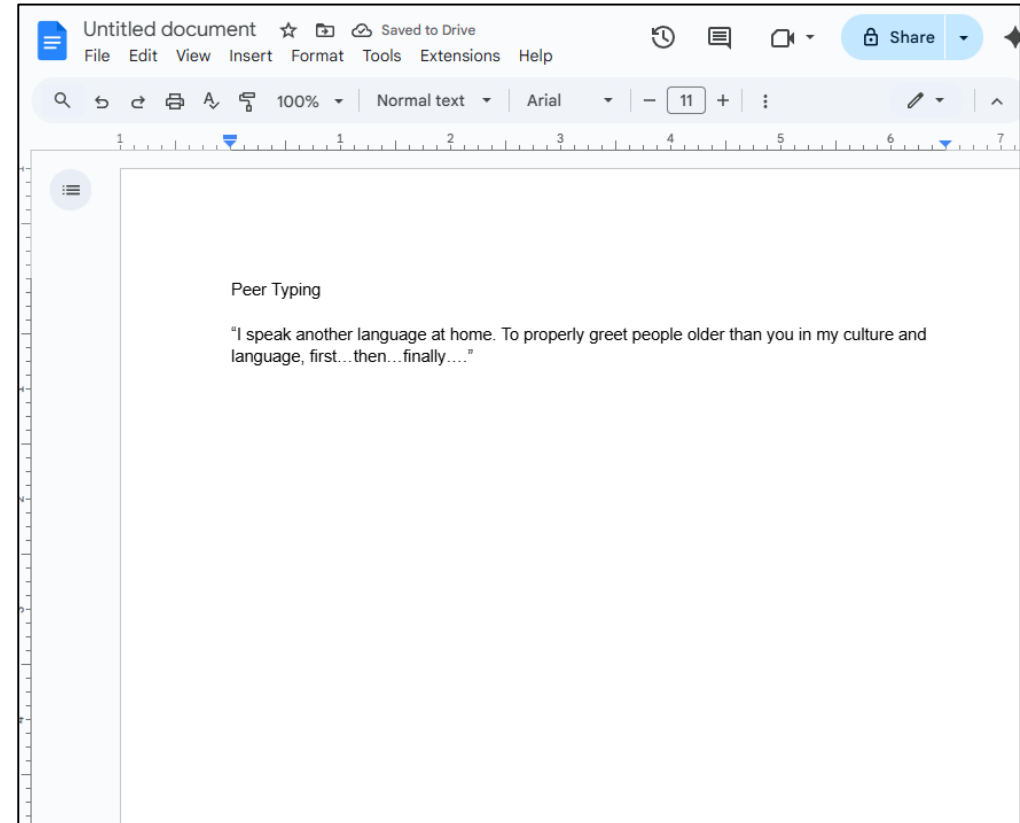


# Step Loop PL Design Flow & User Experience (Typing)

## PL Design Logic view (back end)



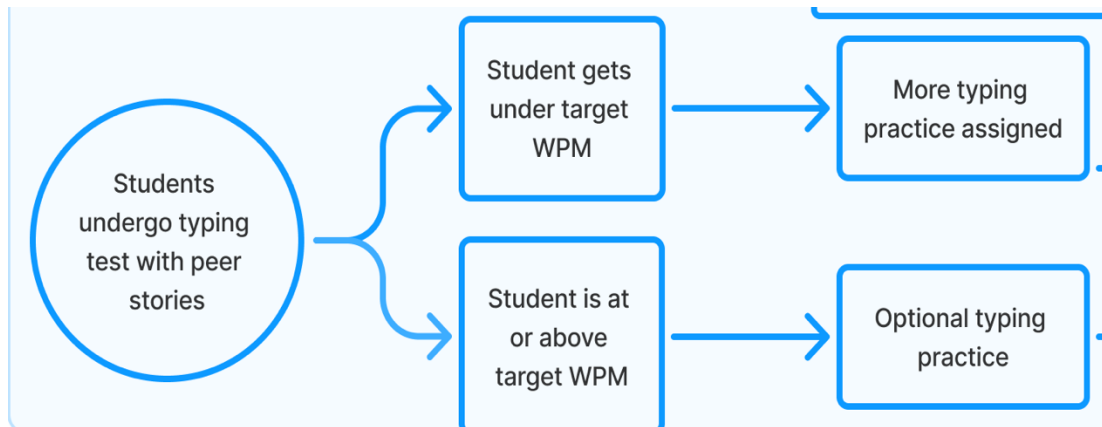
## User Experience (screen view)



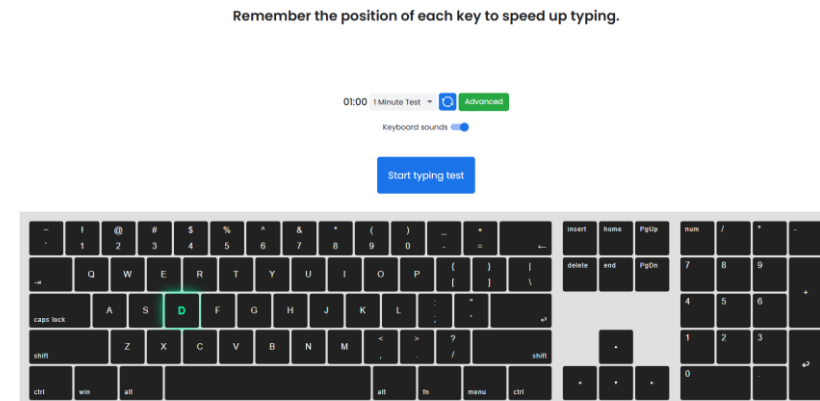
During the student typing portion, students type out their peer's writing, including all typos, errors, and spelling mistakes. Peers will correct each other's mistakes on the bottom of their work and first type it all out on a Google Doc before moving onto the custom typing assessment.

# Step Loop PL Design Flow & User Experience (Assessment)

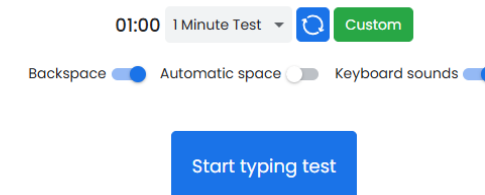
## PL Design Logic view (back end)



## User Experience (screen view)



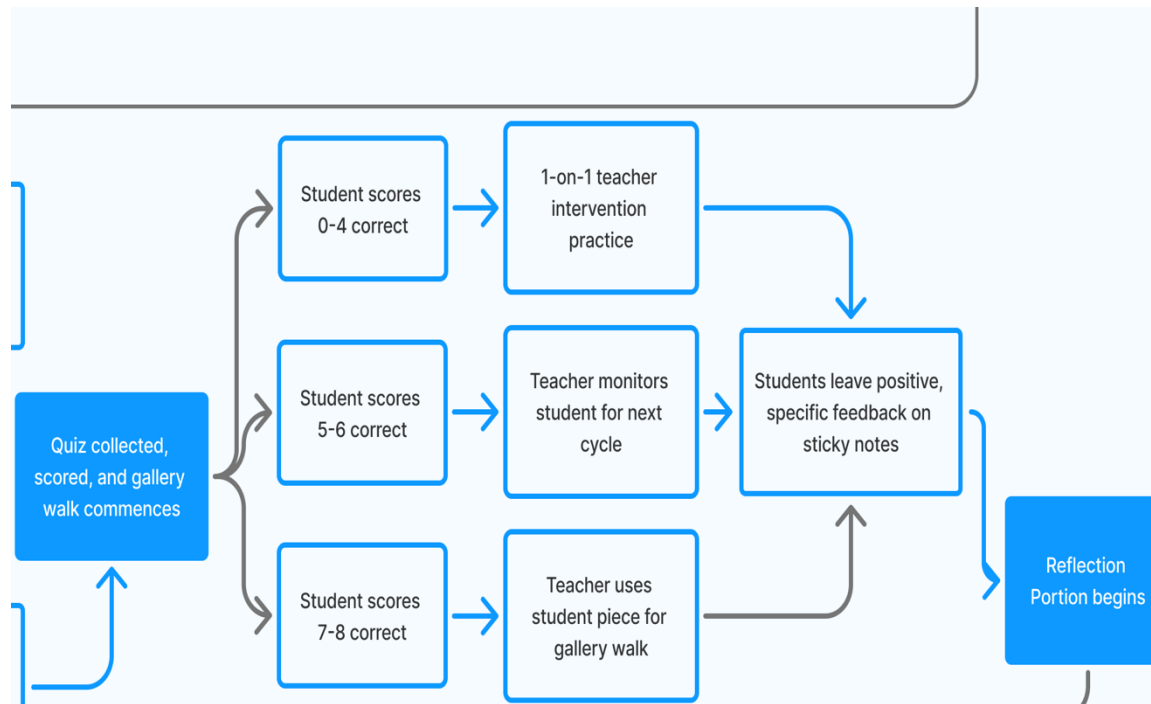
### Customize and start your typing test



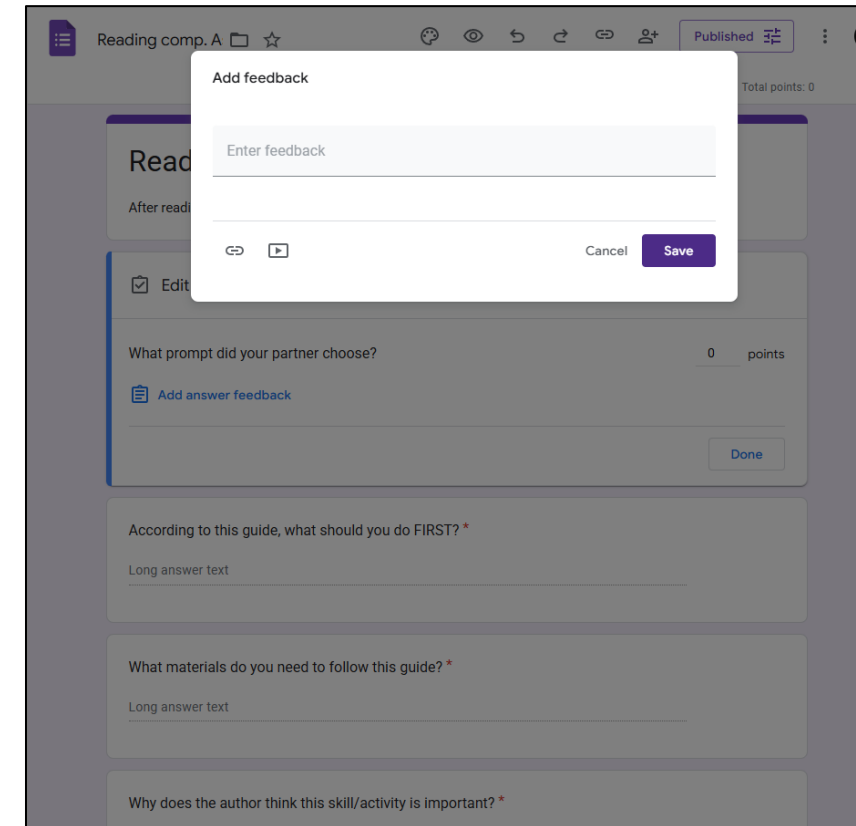
For the assessment step loop, if students get under the target WPM for the program cycle, they'll have to practice typing more until they can reach the target. This will be done on a standard, beginners typing program such as the one on the user experience screen view.

# Step Loop PL Design Flow & User Experience (Assessment)

## PL Design Logic view (back end)



## User Experience (screen view)



The 8-question reading comprehension quiz will include feedback for the teachers to give students after grading. This feedback will pair with the intervention if students get the score required for it.

# Conclusion

This program generates tangible outputs each unit cycle. These handwritten “expert guides” showcase cultural knowledge, typed documents demonstrating increasing WPM, and comprehension quizzes assessing reading skills. Over a typical curriculum with multiple cycles, each student builds a comprehensive portfolio documenting their journey with concrete evidence of engagement and development. These outputs become measurable learning outcomes that directly address the current literacy crisis. By writing, students improve in length, complexity, and grammar. Typing allows for increased proficiency, site-reading, typing speeds, and building digital fluency. Reading comprehension deepens as students master textual evidence, text analysis, and understanding of unfamiliar cultural content. Cultural responsiveness becomes embedded as students learn to honor diverse experiences, recognize differences as assets, and increase their own empathy.

The true impact goes beyond academic metrics. When these students see their cultural knowledge being valued as academic content, it reshapes their own academic identity. Students that once felt marginalized discover that they are experts themselves with valuable knowledge. This program closes achievement gaps by building on strengths rather than trying to “fix” deficits. When students type each other’s cultural stories with precision, they learn empathy through action, building cross-cultural competence for an expanding world-view. Beyond classrooms, families see their knowledge being valued, schools demonstrate improved test scores and reduced achievement gaps, and teachers find renewed energy. By the end of the program, a school culture that welcomes diverse experiences develop, and a sense of community becomes increasingly apparent, creating an environment and culture that thrives. Ultimately, this program demonstrates that students are seen, valued, and provides them with the right skills, equipped to succeed.

# References

Harris, S. (2025, January 29). *The Nation's Report Card Shows Declines in Reading, Some Progress in 4th Grade Math*. Nagb.gov.

<https://www.nagb.gov/news-and-events/news-releases/2025/nations-report-card-decline-in-reading-progress-in-math.html>

Ober, T., Lehman, B., Gooch, R., Olasumbo Oluwalana, Jaemarie Solyst, Phelps, G., & Hamilton, L. S. (2023). Culturally Responsive Personalized Learning: Recommendations for a Working Definition and Framework. *ETS Research Report Series, 2023(1)*. <https://doi.org/10.1002/ets2.12372>

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