A low-threat practice-room interface for neurodivergent game learning

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Fast multiplayer games can convert practice into threat when social judgment, sensory load, ambiguous damage, and repeated failure are experienced as one continuous demand. This manuscript reports a single-user design study of league.aolabs.io, a public review room for League of Legends practice. The system does not claim clinical efficacy, population generality, or competitive optimization. It translates a user-provided learning arc into a low-threat review surface: image-based champion selection, champion-specific situation notes, public logs, and a downloadable record. The strongest contribution is a design pattern rather than a gameplay result: make the next repetition easier to start by letting the player choose the current champion and then read only the situations that matter for that champion. The interface treats bots as a practice room, human games as performance, death-with-intent as a valid rep, and situation review as mental practice. This bounded case suggests how personal learning software can support high-repetition play without becoming another source of evaluation pressure.

1 Introduction

Expert performance depends on repeated, structured practice, but practice is only useful when the learner can remain in the task long enough for repetitions to accumulate (*1*). In competitive games, especially player-versus-player games, the immediate source of failure is not only mechanical difficulty. The learner must also manage uncertainty, sensory load, social interpretation, and the felt cost of visible mistakes. Anxiety can impair attentional control (*2*); cognitive load can interfere with learning when too many elements must be processed at once (*3*). A player who is trying to learn a champion, lane, camera, item build, opponent behavior, teammate expectations, and self-regulation at the same time may experience the game as a judgment environment rather than a practice environment.

The system described here began from a simple transfer from music practice: keep the task playable, choose one thing, trust repetitions, and let improvement compound. The same principle was applied to League of Legends. The first rule was not to win lane or outplay an opponent; it was to farm and survive. That rule later compressed into the phrase “next safe minion.” As the practice record grew, the problem became less about collecting more advice and more about making advice reviewable without overwhelming the player before queueing.

league.aolabs.io is a public AO Labs page built for that purpose. It is not a Riot Games product, a general League guide, a ranking system, or a coaching dashboard. It is a single-page review room that turns one user’s League learning arc into champion-specific situation notes for mental rehearsal. The design is source-bounded: it uses the user’s supplied chat arc and later public notes as its corpus, and it avoids claims that would require clinical, population-scale, or competitive outcome evidence.

2 Results

2.1 A long learning arc was reduced to a small review surface

The seed corpus contained a long narrative account of League practice. The arc included lane fear, camera stability, sensory control, champion feel, bot practice, death tolerance, public yapping as pressure regulation, and champion-specific rules for Samira, Caitlyn, and Fizz. The revised design result was not a long visible essay or a motivational hero. The site exposes an image-only champion picker and then a plain list of detailed situations for the selected champion.

This reduction is the main interface result. It makes the review surface compatible with the user's stated constraint: the page should be pretty, clean, non-poster-like, and not overwhelming. The long record remains useful as paper and log context, but the first screen does not ask the user to process a giant review tray or a generic champion taxonomy before finding the current situation.

Table 1. Compression of the source arc into champion-specific review units.

Source burden	Review unit	Interface expression
Enemy lane feels like judgment	Champion situation	Caitlyn: next safe minion
Damage triggers panic	Mindset situation	Damage is information
Samira has many buttons	Button-order situation	Q before E; W saved for real danger
Low targets bait chase	Chase situation	Low plus reachable, not low plus fog
Champion fit affects repetition	Champion picker	Visual pick first; details after selection

2.2 Champion-specific situations replaced generic cards

The site organizes knowledge by situations rather than by abstract lessons. The current version makes those situations champion-specific and removes the intermediate public labels that had made the cards feel misleading. Selecting Samira now shows one-sentence prompts for stressful moments: wanting to press E because a fight feels urgent, chasing a low-health enemy into fog, pressing W because proximity feels dangerous, staying after R because the damage felt good, or trying to W a tower shot. Each prompt is followed by one combined response paragraph that explains the action, the reason it matters, and the repetition to practice. Selecting Caitlyn shifts the same practice-room idea toward next safe minion, leaving when noticed, recovering after poke, and shooting the closest safe target. This format was chosen because the user needed enough detail to recognize the exact tricky moment without reading a giant rule wall or a card taxonomy.

Table 2. Example Samira situations imported into the public page after label removal.

Situation prompt	Combined response
The fight feels urgent and E wants to become the first button.	Start with Q or an auto so the fight gives information before the dash commits the body.
A low-health enemy runs toward fog or teammates.	Stop at the edge; low only matters when the target is also reachable and cheap to kill.
W feels necessary immediately after dashing in.	Hold W for the real spell; it is a parry for visible danger, not armor against being close.
R works and the excitement makes staying feel automatic.	Treat R as the reward, then leave unless the next target is already low and reachable.
E resets after a takedown.	Read the reset as a new check, not an instruction to dash into tank, tower, fog, or fresh crowd control.
One hit lands and feels like proof that the enemy is competent.	Treat damage as information, step back, stabilize the camera, and choose the next action.

2.3 Champion fit was retained without public fit labels

The champion library is not organized as a tier list. It records fit through the situation set shown after selection, not through short public labels. Samira is currently the active focus because she provides a high-reward dash-reset-R loop, but she also creates the central panic trap of using E as an anxiety button. Caitlyn remains a comfort pick because range, sustain, and the sniper fantasy reduce threat. Fizz remains a reference champion because his button shape makes the desired loop clear: mark, enter, stab, dodge, leave.

The same logic applies to other champions. Kai'Sa is not treated as automatically correct because the user reported that walk animation and visual feel affect willingness to repeat games. Ezreal's Q rhythm is useful, even if the character fantasy is wrong. Rammus is retained as a negative fit example because mechanically simple choices can still be poor practice tools if they make the body feel bored or irritated. The public page therefore shows champion imagery as the selection mechanism and reserves text for the selected champion's situations.

2.4 The public log made mindset part of the artifact

The public log starts with three source entries: the seed arc import, the practice-room frame, and the current Samira law. This is intentionally public. The design choice is that thoughts, panic notes, and mindset rules are not private by default; they are part of the learning artifact. The only excluded material is unrelated sensitive information such as credentials, access tokens, or private third-party identifiers.

3 Discussion

The case suggests that the useful interface for some high-repetition learners is not less information in the abstract, but better placement of information. A long learning conversation can contain many correct rules while still being hard to use before a game. The revised review room hides irrelevant champions behind a visual selector and gives more detail only after a champion is chosen. That is consistent with cognitive-load theory: reducing simultaneous elements can make practice more tractable (*3*). It is also compatible with mental practice research, because the page gives the user a situation script to rehearse before performance (*4*).

The work also reframes death and failure. The site does not encourage intentional feeding or fake failure. It uses the rule "choose the fight; death is allowed; winning is intended." That distinction matters. It keeps agency with the learner while preserving the real objective of the game. It also separates practice failure from collapse: a failed engage that tested damage, W timing, or exit timing is a rep; walking in only to die is not.

Several limits are important. First, this is a single-user artifact, not a clinical intervention. The user self-described ADHD/autism traits and supplied a practice narrative, but the site does not diagnose, treat, or generalize to neurodivergent players as a class. Second, the current evidence is artifact-level: source text, distilled rules, a rendered page, and the paper itself. It does not include a controlled comparison, a ranked outcome, or a match-history dataset. Third, the system deliberately avoids Riot API import in version 1. That keeps the artifact focused on review and self-regulation rather than turning it into a stat tracker.

4 Materials and Methods

Source corpus

The seed corpus was the user-provided League learning arc pasted into the implementation thread on May 17, 2026. It described the user's own League practice, including early Caitlyn farming goals, Samira drills, bot-ladder practice, camera and sensory adjustments, death exposure, and champion-fit comparisons. The implementation treated this text as the current source of truth for the first public situation notes. Match statistics mentioned in the source were treated as user-supplied examples, not independently verified performance results.

Interface requirements

The page was constrained by user instructions gathered during planning: one page only, clean and pretty, same AO Labs vibe, no poster hero, no dense dashboard, no redundant helper labels, no overexplaining, public notes by default, and one quiet paper strip. The page therefore uses the shared AO Labs header, warm off-white palette, dark ink text, 8 px cards, restrained borders and shadows, compact fragments, and one visible PDF action.

Rule extraction

Rules were extracted by finding repeated gameplay or mindset triggers in the source corpus and translating each into a one-sentence situation prompt plus one combined response paragraph. The extraction favored recognition over slogan compression: the prompt had to name the exact stressful moment, and the response had to combine action, reason, and practice rep without separate "do," "avoid," or "drill" labels. For example, the Samira section retained the underlying rules "Q first; earn the E," "W is parry, not armor," and "R is reward, not start," but the public card now starts from the situation that makes the rule necessary. The death section retained "choose the fight; death is allowed; winning is intended." The bot-practice section retained the practice ladder and the current-mode cue.

Public artifact implementation

The website is served by a small Node application on Railway. It serves the hand-authored page and paper artifacts from the public directory and exposes `/api/logs` for public note reads and writes. On Railway, persistent storage is provided through the configured volume path, and writes are gated by `LEAGUE_WRITE_TOKEN`. This keeps public notes browser-independent without adding a fake local-only note form or claiming Riot API integration that is not present in version 1.

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Author contributions

Alan N. Pham supplied the practice corpus, product constraints, and acceptance criteria. The manuscript and site were assembled from those source materials in the AO Labs workspace.

Competing interests

The author owns and operates AO Labs. The site is a personal public artifact and is not endorsed by Riot Games.

Data availability

The first public data source is the League practice arc supplied in the implementation thread and the public log exposed through league.aolabs.io. Raw game screenshots were not included in this first version.

Code availability

The implementation is intended for the `nalalalan/league-app` repository, with the public site, PDF, manuscript source, and log API served at league.aolabs.io.

Additional information

Inc.

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