

BruSHŪ: Cross-Modal Translation of Implicit Micro-Actions in Chinese Calligraphy

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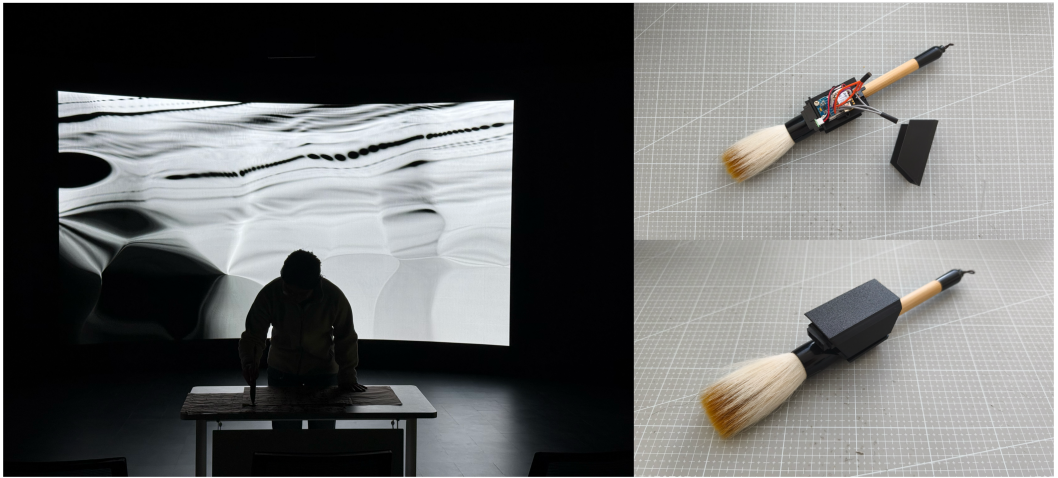


Fig. 1. Left: Performance with **BruSHŪ** and projected visual trace. Right: **BruSHŪ**

Artworks are often encountered as finished artifacts; Chinese calligraphy is a clear example. The implicit micro-actions that shape a trace, including boundaries, transitions, and timing, are fleeting and often underdetermined by the final work. This gap constrains how practitioners reflect on embodied decisions in everyday practice. We ask how to make these micro-actions perceptible to expert calligraphy artists without turning practice into instruction, assessment, or stroke-faithful reconstruction. We present **BruSHŪ**, a perceptual lens that translates aspects of the writing process into interpretable cross-modal cues to support in-the-moment noticing and post-hoc reflection. We also articulate a brush-as-lens framework that treats interpretability, adjustability, and non-normative feedback as prerequisites for reflective practice. We examine **BruSHŪ** through a studio co-creation session with an expert calligrapher and a subsequent live performance deployment, followed by reflection-based inquiry. Our findings suggest that lightweight, tunable cues can surface tacit process structure and support reflection and conversation, provided they preserve established technique and artistic autonomy.

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CCS Concepts: • **Applied computing** → **Media arts**; *Sound and music computing*; • **Human-centered computing** → *Interaction design*.

Additional Key Words and Phrases: Chinese calligraphy, Translating Embodiment, Instrument Design

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1 Introduction

Artistic practices are often encountered as finished artifacts [Brulotte 2012]: a surface can reveal form and expression while obscuring the labor that produced it. In Chinese calligraphy, this tension is especially acute. Writing appears continuous, yet artists compose strokes through a sequence of adjustments: approach, contact, reorientation, hesitation, and re-entry—guided by tacit-embodied know-how — a situated sensorimotor capacity to adapt in the moment, especially around resistance and transitions [Law et al. 1998]. Chinese calligraphy is governed by formal stroke rules, and by *qi*: a felt sense of breath and continuity that expert practitioners sustain across characters and compositions. Contemporary practitioners have foregrounded this processual dimension in distinct ways: Wang Dongling’s large-scale live performances make the calligrapher’s bodily movement spectacularly visible [Wang Dongling 2026]; Zheng Chongbin’s process-based ink installations foreground the material behaviors of ink as it flows and settles [Zheng Chongbin 2026]; and Xu Bing’s interventions into calligraphic legibility demonstrate that what is visible in a writing system can be intentionally restructured [Xu Bing 2026]. Yet even in these process-oriented contexts, the implicit micro-actions shaping each stroke remain fleeting and largely irrecoverable from the final trace [Da-Wei 2012].

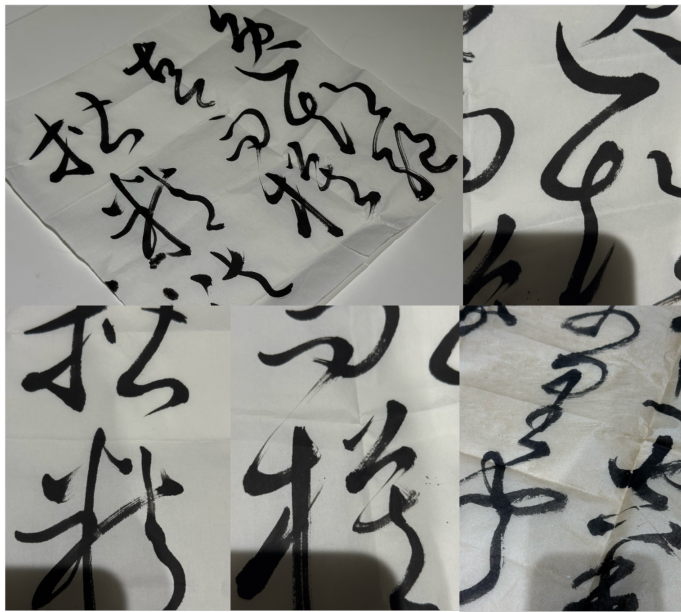


Fig. 2. Details of calligraphic strokes that appear similar but arise from different techniques. The underlying actions are difficult to infer from the finished artifact.

Micro-actions are transient and may leave no stable trace, making them hard to perceive, reference, or compare in critique and studio conversation. Prior systems externalize calligraphic process via motion/force capture[Gong et al. 2025], kinesthetic guidance[Fang et al. 2022], or VR/haptics[Luo et al. 2023], while computational approaches often model outcomes as artifacts to quantify or generate. These efforts can expose process, but they often impose normative framings or prioritize reconstruction, and rapid transitions remain difficult to name. This paper asks: *How might we make implicit micro-actions more perceivable for professional calligraphy artists during practice?*

We present **BruSHŪ**, a sensor-embedded brush and real-time feedback system that acts as a perceptual lens for implicit micro-actions. Rather than reconstructing strokes or scoring skill, **BruSHŪ** externalizes transitions as cues for reflection: discrete auditory event markers for boundaries and turning points, and continuous, stateful visual feedback that evolves with the writing. We examine **BruSHŪ** through an exploratory, studio-based co-creation session in a professional calligraphy artist's everyday practice ecology.

We contribute:

- (1) A framework for translating calligraphic implicit micro-actions into multimodal cues via an instrumented brush, including the translation logic from sensed motion/contact to perceivable feedback.
- (2) **BruSHŪ**: the system design and implementation, including embedded sensing, feature extraction, cue mappings, calibration workflow, and constraints in use.
- (3) Reflections from studio sessions and a subsequent performance, reporting how the lens is taken up across contexts and implications for future tool-as-lens artworks.

2 Related Work

2.1 From Outcomes to Practice in Calligraphy Research

Calligraphy is often encountered as a finished artifact, but making it is a temporal, embodied practice shaped by approach, contact, micro-rotations, and rhythmic segmentation. Interactive systems surface this process for learning and experience: CalliSense captures motion and force-related cues with visual feedback [Gong et al. 2025]; kinesthetic systems guide felt movement [Fang et al. 2022]; and VR/haptics simulate resistance to support tacit-embodied know-how [Luo et al. 2023]. Digital brush systems framed by embodied interaction similarly treat brushwork as coordination among posture, tool, and surface [Lin et al. 2024]. In most of this work, process visibility primarily serves instruction, training, or simulation. Even where process-based framing is explicit, feedback typically guides toward a normative outcome. Computational approaches instead treat calligraphy as an artifact. Recent work quantifies Kai Shu aesthetics and predicts viewer preference from features extracted from finished works [Liu et al. 2025]; generative systems utilize GANs to expand calligraphic forms, by translating poetic affect into strokes [Liu et al. 2024], and exploring new artistic dimensions in Arabic script [Sobhan et al. 2024]. These outcome-centric methods capture form, but the final trace rarely reveals fleeting contact boundaries, posture transitions, or temporal segmentation. [Gong et al. 2025; Liu et al. 2025]

2.2 Sensing Tacit Skill

Sensing can externalize tacit, embodied skill in craft. Multi-layer sensing work highlights the difficulty of capturing tacit-embodied know-how and uses sensing to make hard-to-verbalize competencies discussable [Nitsche et al. 2024]. Instrumentation in woodworking and ceramics similarly supports reflection by exposing hidden physiological or procedural aspects [Liu et al. 2019; Yang et al. 2024]. Many such systems target instruction, assessment, or performance optimization, which can impose a normative “correct” technique. Teaching interfaces [Hao et al. 2025] and

evaluative or predictive models—including outcome-based preference modeling in calligraphy [Liu et al. 2025]—show how instrumentation enables standardization and feedback. For practices centered on interpretation, style, and situated judgment, the question is how sensing supports noticing and articulation without turning practice into compliance. [Hao et al. 2025; Nitsche et al. 2024]

2.3 Cross-Modality Feedback

Perceptual augmentation must remain legible in the moment and referable afterward. Prior work links writing and drawing gestures with sound to create cross-modal instruments, including calligraphy-to-music mappings [Huang et al. 2012] and performance-oriented calligraphy sonification [Schacher and Wei 2019]. Sound can make motion immediate, but purely continuous mappings are hard to point to or compare during rapid transitions. Sonification also uses interpretable cues through discretization and event-like signaling (e.g., earcons, auditory icons, parameter mapping) [Hermann et al. 2011; Nown et al. 2023]. Continuous visual feedback can externalize dynamics via evolving fields and short-lived traces, supporting short-horizon review without reconstruction.

Across these works, three tensions recur: (1) process-aware calligraphy systems prioritize training and correction; (2) outcome-centric computation models form while obscuring micro-actions; and (3) continuous expressive feedback is hard to reference under fast change. These tensions motivate representations that foreground boundaries, transitions, and phrasing.

3 Conceptual Framework: Brush-as-Lens

Core idea. A brush-as-lens system makes practice-relevant micro-actions perceptible by sensing brush dynamics and rendering time-aligned cross-modal cues for in-situ noticing and later reflection. We treat tacit-embodied know-how as the underlying capacity, which becomes visible in practice as implicit micro-actions that can be surfaced through sensed indicators and rendered as interpretable cues.

Implicit micro-actions (Underdetermined actions). Implicit micro-actions are micro-actions that shape a stroke but cannot be uniquely inferred from the finished trace. We focus on (i) **contact boundaries** (pre-contact, touch, sustained contact, lift-off), (ii) **temporal phrasing** (accelerations, pauses, re-entries), and (iii) **postural micro-transitions** (e.g., slight rolling/twisting), which disappear as timing and contact context collapse into a static mark.

From sensing to cues. Brush-proximal sensing produces *indicators* (not ground truth) that form *detected units* (events + compact traces), which are rendered as cross-modal cues. Cues take the form of **event markers** and **state traces** that describe what happened (e.g., contact starts, hesitation cluster) without judging correctness, enabling writers to later point to and compare specific moments while managing distraction risk.

Design propositions (P1–P3). Three propositions guide the design toward usable reference points with minimal intrusion: **P1 Salience over coverage**—cue meaningful transitions rather than every fluctuation; **P2 Interpretability over reconstruction**—favor discrete reference points over stroke reconstruction, and treat an event type as reliable if it repeats within a session, is consistent across writers, or remains stable after per-user calibration; **P3 Non-prescriptive minimalism**—keep cues renameable and descriptive, with low-intrusion sensing/feedback (physical and attentional limits) and logged calibration parameters.

Operationalization. Detected units include boundary events (e.g., brushDown/brushUp) and within-contact transitions (turns, hesitations, re-entries), and cue load is controlled via temporal

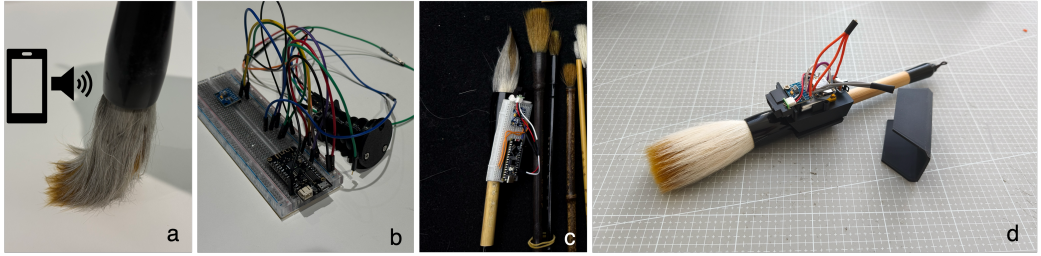


Fig. 3. Iterative prototyping of *BruSHŪ*. We progressed through four stages to reduce hand-feel micro-adjustments (press, lift, turn, dwell) into stable signals and interpretable feedback: (a) early Wizard-of-Oz exploration using external audio cues, (b) using bouncy magnet embedded sensing tests mapping micro-actions to measurable dimensions but failed, (c) placement and form studies integrating an IMU and near-tip IR proximity sensing in a familiar brush grip, and (d) the compact, brush-shaped integrated prototype.

gating (minimum interval) plus a merge rule that clusters bursts (e.g., multiple micro-hesitations into one “hesitation cluster”).

4 Design the Brush

We designed *BruSHŪ* with a four-step workflow: (i) identify technique-relevant action semantics through practice, (ii) map those semantics to time-aligned auditory cues and a persistent visual texture, and (iii) implement a sensing-and-feedback loop that keeps the cues stable under natural variation in touch, paper, and gesture.

4.1 Intent, Scope, and Principles

BruSHŪ makes technique-relevant micro-actions perceptible and discussable in real time, so practitioners can point to moments during writing and align them in review. We focus on three process structures: **boundaries** (brush down/up), **turning points** (brief direction/orientation shifts), and **rhythm** (tempo/effort changes).

4.2 Iterative Trajectory

Across iterative prototypes (Fig. 3), we reduced hand-feel micro-adjustments (press, lift, turn, dwell) into stable signals and interpretable feedback units while preserving a write-first brush form. Practice exploration and Wizard-of-Oz trials helped us select measurable dimensions that align with what practitioners already monitor: orientation change and motion energy for turns and phrasing, and tip-surface proximity as a proxy for contact engagement. We then converged on a compact IMU for orientation/motion and an IR proximity sensor near the tip, integrated into a brush-shaped housing that preserves grip and writing posture. Contact state gates writing from non-writing to reduce ambiguity, and mappings remain adjustable in situ without forcing technique adaptation.

4.3 Representation: Action Semantics to Sound and Visual

Our representation follows a three-level structure: **calligraphic action semantics** → **sound** → **visual**. Action semantics define the units of interest (boundaries, turning points, rhythm). Sound renders these units as recognizable time cues. Visual provides a persistent state texture that evolves during writing, making transient structure noticeable in the moment and alignable afterward.

Table 1. Mapping from action semantics to auditory and visual cues. Sound provides boundary markers and event cues organized by a five-tone pitch set and bowed-string timbre; the visual layer renders a stateful texture field driven by features extracted from the final mixed audio stream.

Calligraphic moment	Auditory cue	Visual cue
Set-down (begin)	Clear onset; sound starts	Injection begins; a seeded “knot” appears and the field starts accumulating
Lift-off / finish (end)	Rapid decay to silence; sound stops	Injection stops; the field drifts / fades, leaving a short-lived after-trace
Lift / light touch	Lower register; lighter tone	Thinner, sparser texture; softer contrast
Press / heavy touch	Higher register; fuller tone	Denser, heavier texture; stronger “ink mass” / harder edges
Dwell–release (fast–pause–fast)	High–low–high contour; pause sounds more settled	Stretch–deposit–stretch: a local sediment node forms, then is pulled open
Reverse stroke	Increased complexity (rougher / less pure timbre)	Local twisting and vortices; finer high-frequency detail increases
Swift stroke (rapid writing)	Lower-voice becomes more active; overall brighter / tenser	Stronger injection and faster flow; finer, more turbulent grain
Side-tip (oblique)	Mid-voice tilts: sharper / raspier color	More directional anisotropy: slanted striations / brush-like shear

Sound uses a **five-tone pitch set** as a stable categorical scaffold and a **bowed-string timbre** as a continuous expressive dimension. Boundaries (brushDown/brushUp) appear as clear onsets/offsets. Within-contact micro-transitions appear as discrete note events whose timbre and intensity reflect motion and engagement. The visual layer renders a **stateful ink-like texture field** driven by features extracted from the **final mixed audio stream**: each frame reads the current audio output to produce an injection texture that enters a feedback loop, yielding a water-ink-inspired field that accumulates, drifts, and reorganizes with the evolving sound.

Driving the visual from the audio stream is deliberate. The audio engine already resolves raw sensor noise into discrete, interpretable events; the visual inherits this resolution. A parallel sensor-to-visual pathway would split interpretation into two chains, breaking the cross-modal coherence on which joint reference depends.

4.4 Technical Implementation

The system uses open-source software and readily available components [Merendino et al. 2024; Merendino and Rodà 2021], supporting replication and extension.

4.4.1 Brush sensing. The brush as in Fig. 4 integrates two sensors near the tip: an IMU (MPU6050) for orientation and motion, and an infrared IR proximity sensor (Sharp GP2Y0A21YK0F) for tip–surface interaction. The enclosure is SLA 3D printed in resin to position sensors compactly.

The IMU provides roll, pitch, yaw, and a motion-energy metric from smoothed acceleration. The IR signal is mapped through a calibrated nonlinear function to produce a normalized contact-intensity value, used as a proxy for engagement and exertion. During operation, the brush transmits a compact state vector (roll, pitch, yaw, motion energy, contact intensity) via ESP-NOW to an ESP32 receiver.

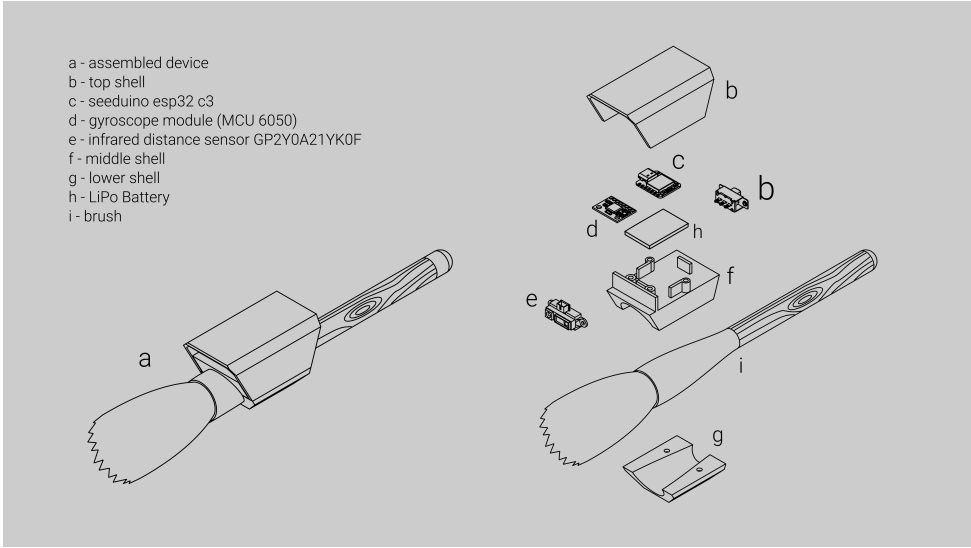


Fig. 4. Hardware design of the **BruSHŪ**. Left: the fully assembled device (a). Right: exploded view of the modular construction, including the 3D-printed enclosure (top shell b, middle shell f, lower shell g), embedded electronics (Seeeduino ESP32-C3 c, gyroscope/IMU module d, IR distance sensor GP2Y0A21YK0F e), LiPo battery (h), and the brush body (i).

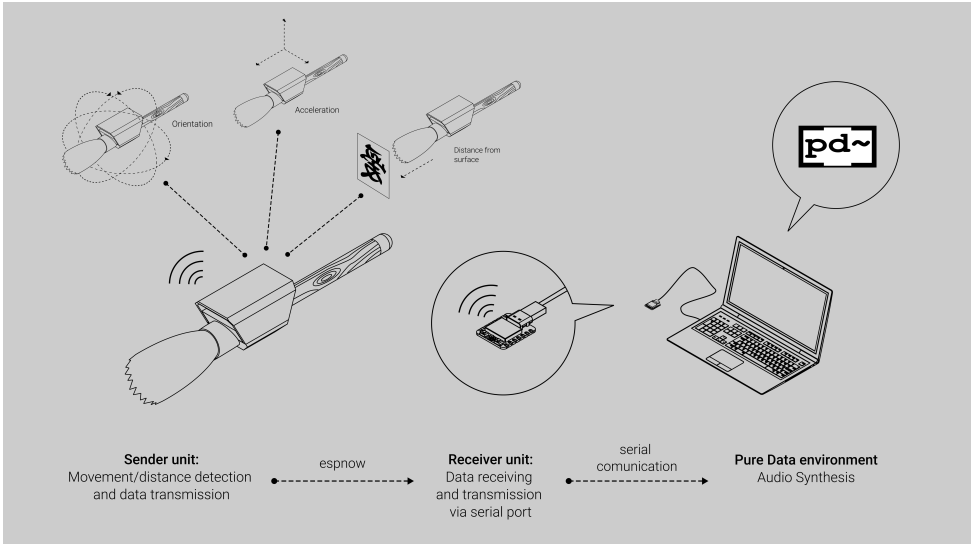


Fig. 5. Sensing and communication pipeline. The brush-mounted sender unit captures orientation, acceleration (motion energy), and tip-surface distance, then transmits the data wirelessly via ESP-NOW. A receiver unit relays the stream to a computer over a serial connection, where a Pure Data (Pd) patch performs real-time audio synthesis to provide feedback.

4.4.2 Audio. Pure Data implements an event-driven audio engine aligned with action semantics as in Fig. 5. Sensor data arrives over Serial and is converted into two event types: **boundary events**

(brushDown/brushUp), derived from contact with temporal debouncing, and **within-contact events**, triggered by rapid changes in orientation and motion energy to capture turning points and micro-transitions.

Events are mapped to a five-tone pitch set for clear categorical perception. Bowed-string-inspired timbre encodes engagement and turning complexity, while intensity uses coarse energy cues to limit feedback density without sacrificing fine-grained actions.

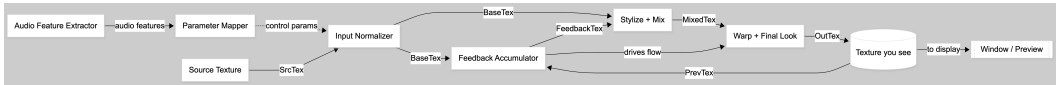


Fig. 6. Audio-driven feedback texture pipeline. The Audio Feature Extractor converts the real-time audio stream into simple features (e.g., loudness/bass/beat). The Parameter Mapper turns these features into smooth control parameters that drive the visual system. A Source Texture (SrcTex) is standardized by the Input Normalizer to produce BaseTex, which is injected into the Feedback Accumulator (temporal memory) and also sent to Stylize + Mix. The accumulator outputs FeedbackTex, which is stylized and mixed with BaseTex to form MixedTex. Warp + Final Look generates the final OutTex (the texture shown on screen). The pipeline forms a closed loop by feeding OutTex back as PrevTex, enabling the texture to evolve iteratively over time.

4.4.3 Visual. The visual layer renders an ink-like state texture whose dynamics are driven by sound. Each frame injects new structure from audio analysis while carrying a persistent state forward so that short-lived organization remains visible during writing. The renderer analyzes the *final mixed audio stream* produced by Pure Data; the resulting features drive the layered injection, drift, and advection processes shown in Fig. 6.

5 Case Studies: Studio Session and Live Performance Deployment with an Expert Chinese Calligrapher

We report an exploratory case study examining how BruSHŪ makes micro-actions perceptible across two contexts: (1) a guided studio session in the artist’s everyday practice setting, and (2) a performance deployment at an invitation-only event followed by a post-deployment interview. This is not a usability test; we document situated uptake, breakdowns, and reflection in practice.

5.1 Participants

Artist A. An expert Chinese calligrapher with over 30 years of practice and formal training beginning in early childhood. Artist A holds a doctoral degree and participates in national and local level calligraphy communities. We invited Artist A because sustained professional practice and public-facing experience allowed us to examine **BruSHŪ** in both studio work and live performance.

Researchers. Two researchers attended each deployment: one facilitating or managing technical setup, the other documenting.

Audience (performance). The performance took place at an invitation-only event in a club venue with approximately 30 attendees. The audience consisted primarily of electronic and experimental music researchers and enthusiasts.

All participants provided informed consent for recording and use of quotes, and we anonymized identities in the paper.

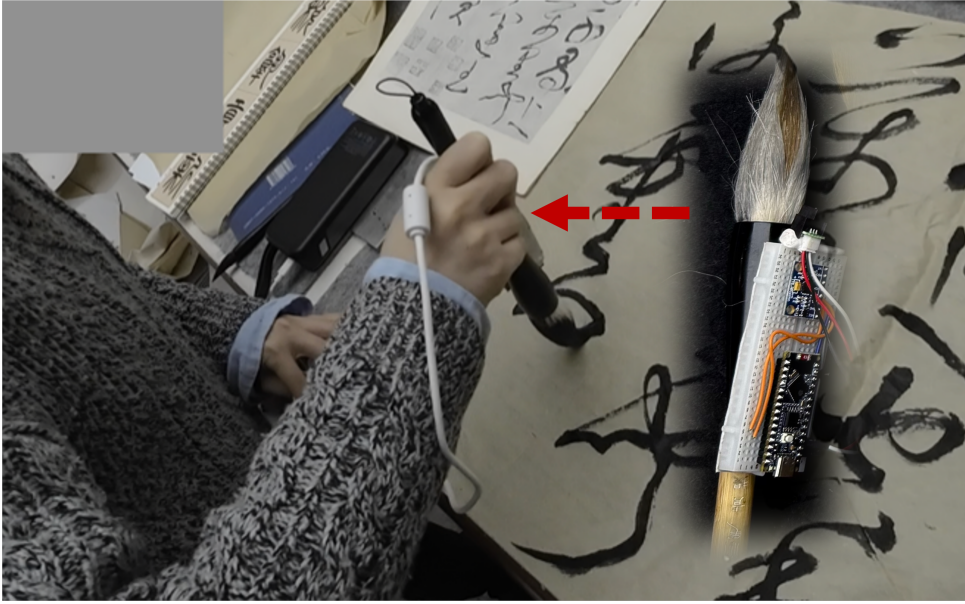


Fig. 7. Studio session with Artist A using **BruSHŪ**. The four-hour session comprised three phases: an initial interview on calligraphic expertise; a contextual introduction to technology-based art; and a practice phase of six writing segments alternating between a conventional brush and **BruSHŪ**, with four to five parameter adjustment pauses in between.

5.2 Studio session

The studio session took place in Artist A's own studio to preserve the everyday practice ecology, reducing confounds introduced by a lab setting. We used a think-aloud protocol: Artist A wrote continuously while verbalizing intentions and micro-actions, and researchers adjusted cue parameters—including pitch mapping logic and Pure Data patch configurations—between segments based on the artist's commentary.

5.3 Performance deployment

Approximately one month later, Artist A performed with **BruSHŪ** at the venue described above. The performance comprised two sections: (1) cursive script, characterized by fluid, continuous strokes and rapid tempo; (2) followed by clerical script, whose deliberate, structured rhythm produced a markedly different gestural quality. The contrasting rhythmic and gestural qualities of each script produced noticeably different audiovisual characters, illustrating the system's responsiveness to variation in writing register.

Staging and visibility. A large screen was positioned behind the writing table, facing the audience at approximately 6–9 meters. Lighting remained relatively dark: Artist A could see ink on paper, but the writing surface and bodily motion were intentionally deemphasized.

Technical setup. Subject to venue availability, the system ran on an MSI Titan GT77 HX (13V) laptop with an NVIDIA RTX 4090 GPU. Audio output was routed through a Focusrite Scarlett 2i2 audio interface, mixed via a Yamaha mixer, and played back on a JBL PartyBox or Genelec speaker setup (depending on availability). Visual output was presented on the large external screen.

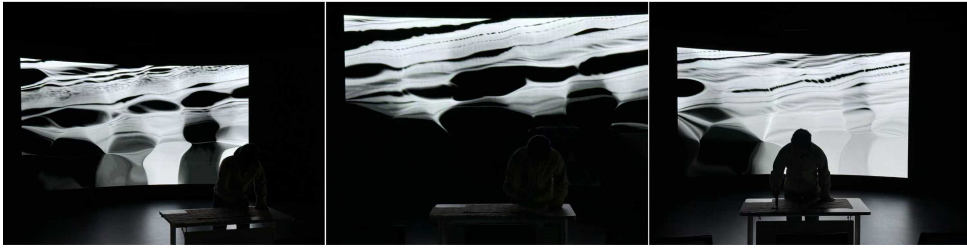


Fig. 8. Live performance deployment of **BruSHŪ** (approximately ten minutes, two sections: cursive script followed by clerical script). The **BruSHŪ** and writing act are present at the center table (foreground left), while generated sound and the visual trace (projected at right) form the primary perceptual channel for the audience. This staging directs attention toward the translated process rather than direct observation of hand motion, making transient micro-transitions (turns, hesitations, re-entries) legible as an evolving backdrop.

5.4 Qualitative Evaluation

5.4.1 Thematic findings. We transcribed recordings from the session and analyzed them using deductive thematic analysis[Terry et al. 2017]:

T1. BruSHŪ translates what experts attend to: “breath + thresholds” in writing. Artist A described expertise as maintaining global continuity (qi/rhythm; a felt “breathing” across characters) while continuously negotiating micro-actions (speed shifts, turns, connect/disconnect, force changes). On this account, **BruSHŪ** must translate not only the finished trace but also the boundary work that sustains continuity. “You need a global view; the characters have a kind of breathing.”

T2. BruSHŪ makes micro-actions available: multimodal cues externalize boundary work in real time. **BruSHŪ**’s multimodal cues helped Artist A notice, name, and reference micro-actions during writing—especially boundary moments (lift/re-contact) and phrasing—rather than judging only the completed trace. The cues supported attention to the action–outcome relationship as it unfolded. “Most of my attention was on the relationship—what happens in the sound when I write heavier?”

T3. BruSHŪ remains usable only when it is non-interfering yet tunable to context. Across studio and performance settings, **BruSHŪ** was acceptable only when the instrumented brush did not force changes in grip, force, or flow and when cue parameters could be tuned to the venue (volume, density, thresholds, mapping sensitivity). Some presets were intentionally mechanical and glitch-like; the issue was not timbre but whether feedback remained stable and readable without diverting attention from writing. When it did not, Artist A adapted technique to the device. “I held back—I used only sixty or seventy percent of my usual force.” This adaptation reveals an unresolved tension: a brush that alters writing—even subtly—is not fully write-first, regardless of intent. Resolving this tension remains an open design challenge.

5.4.2 Audience Response. Audience responses were collected through informal conversations and field notes during and after the performance. One attendee, an experimental music enthusiast without calligraphy background, noted: “Honestly, the clerical section felt pretty flat; the music was very even. But the music in the cursive section changed completely. You could clearly feel the rises and falls. I wasn’t sure if you’d changed the timbre or some parameter settings.” No parameters were changed between sections; the difference arose entirely from the contrast in writing with different scripts, suggesting that the cross-modal translation made gestural structure legible to non-practitioners.

6 Discussion

We asked how a *perceptual lens* can make implicit, micro-actions perceivable and discussable in professional calligraphic practice without turning practice into instruction, evaluation, or stroke-faithful reconstruction [Goodwin 1994; Polanyi 1966; Schön 1983]. Across our case studies, the lens mattered less for producing “more data” than for surfacing a small number of timely, interpretable reference points that practitioners could recognize and talk about while writing [Weiser and Brown 1997].

In studio use, usefulness came from *salient* transitions the artist already treats as boundaries in the writing flow—contact boundaries, phrasing shifts, and small turns—rather than exhaustive measurement. Sparse event types and short-lived traces helped practitioners notice and name micro-actions *in situ* (T2) and relate them across characters (T1), while gating and merging kept cues referenceable instead of overwhelming [Aigner et al. 2011; Heer and Shneiderman 2012]. For cues to remain discussable, they needed recognizable units rather than reconstruction. Using contact state as a semantic gate and explicitly marking transitions gave stable points to point to, compare, and revisit [Goodwin 1994]. More generally, discretization and event-like signaling can improve interpretability and reference under fast change [Hermann et al. 2011; Nown et al. 2023].

T3 highlights a hard constraint: the brush must remain write-first. The lens should not alter grip, force, or flow, and tuning must be usable where writing happens, since paper, ink, and venue conditions shift what counts as a meaningful boundary [Fang et al. 2022; Lin et al. 2024; Luo et al. 2023]. Just as importantly, evaluative framings can make a tool socially unusable regardless of technical merit; keeping representations open to interpretation can help resist drift toward comparison, ranking, or summarization that becomes assessment [Gaver et al. 2003; Weiser and Brown 1997]. Adjacent instrumentation systems show how this drift toward standardization can accelerate [Hao et al. 2025; Liu et al. 2025]. Descriptive, renameable cues keep attention and conversation open while resisting drift toward compliance. When *BruSHŪ* enters performance, the same cue-and-translation process changes meaning as it becomes a public-facing channel. In our venue, projected visuals and generated sound carried what the audience could not see in fine hand motion, turning the lens into compositional material [Huang et al. 2012; Schacher and Wei 2019]. Designing for performance therefore emphasizes distance legibility, robustness to venue variation, and deliberate control over what is revealed versus what remains tacit so the translation does not become didactic [Hermann et al. 2011; Nown et al. 2023].

This work reflects one co-creation context with one expert practitioner and does not claim generality across scripts, materials, pedagogies, or communities. Future work should test transfer across traditions and longer-term use, including how cue vocabularies evolve. Richer sensing may help only if it preserves hand feel and writing form; expanding features also risks drifting toward evaluation, leaving an open challenge of supporting critique while preserving non-prescriptiveness and agency [Gaver et al. 2003; Polanyi 1966; Schön 1983]. Technical constraints also bound the current system: the IR proximity sensor’s nonlinear response varies with paper surface and ink saturation, and calibration must be repeated across venues. The IMU’s orientation estimates may drift during extended sessions, and the current contact-intensity proxy does not distinguish between deliberate pressure variation and incidental grip adjustment.

7 Conclusion and Future Work

We presented *BruSHŪ* as a perceptual lens for implicit, micro-actions, using restrained, interpretable cues to make fleeting boundaries, transitions, and temporal phrasing available to attention and conversation during practice. Our studio co-creation suggests that such lenses can support reflection and critique by providing shared referents that move discussion beyond product-only

judgment, while also revealing that non-normativity and “not changing writing” are hard conditions of entry in practice ecologies shaped by orthodoxy and gatekeeping. Further development may involve collaborations with musicians and visual artists, engaging a broader calligraphy community through multi-brush performance, and an interactive installation open to non-practitioners.

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