

RESEARCH ARTICLE

The Reflection Journal as a Qualitative Instrument for Developing Speech-Pedagogical Competence in Pre-Service Deaf Educators

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Abstract

Speech competence constitutes a cornerstone of professional efficacy in deaf education (surdopedagogy), where the educator's own speech functions simultaneously as an instructional medium and as a primary developmental and corrective model for hearing-impaired learners. Despite this centrality, teacher-training curricula in special education frequently privilege theoretical instruction and demonstrable technique over the metacognitive capacities that allow novice educators to monitor and refine their own speech behaviour in real time. This study addresses that gap by examining the Reflection Journal as both a qualitative research instrument and a pedagogical mechanism for cultivating speech-pedagogical competence among pre-service deaf educators. Grounded in Schön's theory of reflective practice and structurally aligned with the collaborative inquiry ethos of the Japanese Lesson Study model, the journal was implemented across a full academic semester using a standardized four-tier reflective framework addressing self-observation, learner perception of the speech model, evaluation of the corrective plan, and forward-oriented action planning. Using qualitative content analysis, entries were coded along a continuum from surface-level description to deep critical analysis. The discussion synthesizes how sustained, structured reflective writing is theorized to support diagnostic mastery, professional self-regulation, and adaptive pedagogical decision-making in surdopedagogical practice. The paper concludes with methodological recommendations for embedding reflective journaling within special-education teacher-training curricula and identifies directions for future empirical validation.

KEY WORDS

Reflection journal, speech-pedagogical competence, pre-service deaf educators, surdopedagogy, qualitative content analysis, reflective practice, Lesson Study, teacher self-regulation.

INTRODUCTION

Special education, and deaf education (surdopedagogy) in particular, places an unusual professional burden on the teacher's own speech. Unlike most instructional contexts, in which teacher talk is primarily a vehicle for content delivery, the surdopedagog's articulation, pacing, intonation, and non-verbal speech cues are themselves the object of the learner's

developmental work: hearing-impaired children acquire and correct their own speech largely by referencing the model the teacher provides (Vygotsky, 1993; Rechitskaya & Kuzmicheva, 2004). Teacher speech is thus simultaneously instrument and content, medium and model. This dual function elevates the stakes of speech-pedagogical

competence — the integrated capacity to produce a clear, correct, and pedagogically calibrated speech model while continuously monitoring its effect on the learner.

Conventional teacher-training pathways for surdopedagogy have historically emphasized declarative knowledge (phonetics, defectology theory, correction methodology) and supervised skill drills, with comparatively little structured attention to the metacognitive dimension of practice: the pre-service teacher's capacity to notice, interpret, and act upon the moment-to-moment quality of their own speech delivery. Research on teacher cognition more broadly suggests that this metacognitive layer is not incidental but constitutive of expertise — that the difference between routine and adaptive practitioners lies substantially in the habits of reflection they bring to their own performance (Schön, 1983; Farrell, 2015). This has motivated a broader turn, across teacher-education research, toward reflective writing, portfolios, and structured journaling as both developmental tools and qualitative research instruments capable of externalizing otherwise tacit professional reasoning (Moon, 2006).

Within this broader movement, the present paper examines the Reflection Journal as a method specifically adapted to the demands of pre-service deaf education. The central premise is that a standardized, repeatedly-cued reflective structure — rather than open-ended or occasional reflection — is what converts journaling from a diary-like exercise into a rigorous qualitative instrument capable of yielding both developmental benefit for the student-teacher and interpretable data for the researcher or supervisor. The approach draws an explicit methodological parallel with Japan's Lesson Study tradition, in which collaborative planning, observation, and structured post-lesson analysis function as a continuous, socially embedded improvement cycle (Fernandez & Yoshida, 2004; Lewis, Perry, & Murata, 2006); the Reflection Journal adapts this cyclical, structured-inquiry logic to an individual and continuous format suited to the practicum conditions of pre-service surdopedagogy training.

Problem Statement

Three converging problems motivate this study. First, speech-pedagogical competence is difficult to assess through conventional summative instruments (lesson observation checklists, final examinations) because much of what distinguishes a competent speech model — sensitivity to a

child's real-time perception, willingness to adapt a corrective step that is failing — is not visible in a single observed lesson but emerges only across a trajectory of practice. Second, pre-service teachers frequently lack an explicit vocabulary and structure for self-monitoring their own speech behaviour, which limits the transfer of theoretical phonetic and correctional knowledge into responsive classroom action. Third, existing qualitative approaches to reflective writing in teacher education are rarely tailored to the specific perceptual and diagnostic demands of surdopedagogy, where the object of reflection is not merely "the lesson" in general but the fine-grained relationship between the teacher's articulation and the child's perception of it.

Aim and Research Questions

The aim of this study is to describe and theoretically justify a structured Reflection Journal method for developing and assessing speech-pedagogical competence in pre-service deaf educators, and to examine, through qualitative content analysis, how variation in reflective depth relates to indicators of diagnostic and professional growth. The paper addresses three questions:

1. How can a standardized reflective structure be designed to capture the specific diagnostic demands of speech-model delivery in surdopedagogy?
2. What qualitative distinctions differentiate surface-level from deep critical reflection in pre-service deaf educators' journal entries?
3. How does the depth of reflective practice, as captured by the journal, relate to indicators of diagnostic mastery and professional growth, and how does this method align with established international reflective-practice frameworks such as Lesson Study?

LITERATURE REVIEW

The theoretical basis for structured reflective writing in professional education traces to Dewey's (1933) distinction between routine and reflective action, later elaborated by Schön (1983) into the now-canonical distinction between reflection-in-action and reflection-on-action. Schön's practitioner reflects not only after the fact but reshapes practice in the midst of it — a formulation particularly apt for surdopedagogy, where a teacher must adjust articulation or pacing within a single exchange based on the child's immediate response. Boud, Keogh, and Walker's (1985)

model further specifies reflection as a cycle of returning to experience, attending to feelings, and re-evaluating experience, a structure echoed in the present journal's movement from observation (Question 1) through evaluation (Question 3) to renewed action (Question 4).

Learning journals have been widely documented as instruments that externalize tacit professional reasoning and make it available for both self-regulation and research analysis (Moon, 2006). Gibbs' (1988) reflective cycle and Farrell's (2015) framework for promoting teacher reflection in language education both demonstrate that reflection quality is not automatic: without a scaffolding structure, novice practitioners tend toward descriptive, surface-level accounts that recount events without analysing their pedagogical causes or consequences. This finding directly informs the rationale for the four-tier structure adopted here, which is designed to systematically pull entries away from mere description and toward diagnostic reasoning.

Within the defectological and surdopedagogical tradition, the teacher's speech is treated as a primary corrective-developmental stimulus, consistent with Vygotsky's (1993) broader account of mediated development, in which higher psychological functions — including speech — are formed through interaction with a more competent model before being internalized by the learner. Correction methodologies for hearing-impaired children (Rechitskaya & Kuzmicheva, 2004) place particular emphasis on articulatory clarity, controlled pacing, and the deliberate use of residual hearing and visual (labial) cues, all of which depend on the teacher's own disciplined speech production. Yet the professional literature has offered comparatively little guidance on how pre-service teachers develop conscious control over these parameters, which is the gap the Reflection Journal method is intended to address.

Japan's Lesson Study model (Fernandez & Yoshida, 2004; Lewis et al., 2006) offers a widely cited international example of structured, cyclical, evidence-grounded reflection embedded directly in professional practice rather than treated as a separate add-on activity. Its core features — a shared observational focus, structured post-lesson analysis, and iterative refinement of practice — parallel the logic of the Reflection Journal, though Lesson Study is collaborative and this journal method is individual. The comparison is used throughout this paper not to claim equivalence but to situate the journal within an internationally recognized family of

structured reflective-inquiry methods, strengthening its claim to methodological rigor beyond an ad hoc journaling exercise.

While reflective journaling is well established in general teacher education and, increasingly, in second-language teacher education (Farrell, 2015), its adaptation to the specific perceptual and diagnostic demands of deaf education — where the object of reflection is the moment-to-moment relationship between teacher articulation and child perception — remains underexamined. This paper contributes a domain-specific structural model and a qualitative content-analysis approach designed to close that gap.

METHODS

This study employs a qualitative methodological design centred on document-based content analysis. The Reflection Journal itself constitutes both the pedagogical intervention and the primary data source, consistent with practitioner-inquiry traditions in which the artefacts of professional practice (journals, portfolios, lesson protocols) serve simultaneously as developmental tools and research data (Moon, 2006). The design is descriptive-interpretive rather than experimental: the aim is to characterize the structure, implementation, and analytic yield of the method rather than to establish causal effect sizes, and any relationships discussed between reflective depth and professional indicators should be read as theoretically grounded interpretive claims rather than statistically validated findings, pending future empirical replication (see Section 5.3, Limitations).

The method was designed for implementation within the practical-training (practicum) component of a pre-service surdopedagogy programme, in which students undertake structured teaching sessions in special-education school settings under academic and clinical supervision. The intended participant population is undergraduate pre-service deaf educators in the practicum stage of their training, working under the guidance of an academic supervisor who collects and analyses the journals at the conclusion of the semester. Institutional and ethical details for a specific implementation cohort (sample size, school sites, consent procedures) should be reported by the researcher for the particular offering being described in a given study; this paper presents the generalizable structural and analytic

model.

The journal serves two integrated functions:

- As a research instrument, it allows an academic supervisor to trace the evolution of a student's metacognitive and pedagogical reasoning across the semester through a stable, comparable document trail.
- As a developmental mechanism, it supports pre-service teachers in recognizing their own speech competence, identifying strengths and weaknesses, and cultivating what this paper terms reflective-diagnostic indicators — observable markers, within the text of an entry,

of a student's capacity to diagnose and respond to problems in their own speech delivery.

To maintain analytic comparability across students and across the semester, each entry is required to follow a fixed four-question structure (Table 1 below outlines the analytic function of each tier). This progression — observation, perception, evaluation, planning — mirrors Boud et al.'s (1985) return–reappraisal–reintegration cycle while being re-specified around the particular diagnostic object of surdopedagogical practice: the teacher's speech and the child's perception of it.

Table 1. The four-tier structure of the Reflection Journal and its analytic function

Tier	Guiding Question	Analytic Function
1. Self-Observation	What specific observations did I make regarding my own speech during today's session?	Externalizes reflection-in-action; establishes a descriptive baseline
2. Perception Analysis	What positive and negative tendencies were observed in how the child received my speech model?	Shifts focus from teacher performance to learner reception; central to surdopedagogical diagnosis
3. Corrective Strategy Evaluation	Which step of the speech-correction plan functioned as anticipated, and which failed to achieve its objective?	Introduces evaluative, cause-and-effect reasoning about method effectiveness
4. Action Planning	What specific modifications will I implement in the subsequent practical session?	Converts reflection into forward-oriented, testable pedagogical action

Figure 1 illustrates the overall data flow of the method, from the individual practical session, through the structured journal entry, to the semester-long portfolio analysed by the supervisor.

Figure1. Structural flow of the Reflection Journal method

Practical Session (Special School) → 4-Question Reflective Journal Entry (Self-Evaluation) → Semester-Long Portfolio (Data Corpus) → Supervisor Content Analysis & Correlation

Reflection journals are maintained continuously throughout the academic semester, with one entry completed after each practical teaching session. Entries are submitted to the academic supervisor at the conclusion of the term as a complete portfolio, allowing analysis of both cross-sectional entry quality and within-student longitudinal change across

the semester.

Entries are analysed using qualitative content analysis (Elo & Kyngäs, 2008), proceeding inductively from close reading of entries toward a coding scheme that locates each entry along a continuum of reflective depth:

- Surface-level description: the entry recounts classroom events (what was said, what happened) without critical self-assessment, without identifying causes for observed difficulties, and without linking observation to pedagogical justification.
- Deep critical analysis: the entry demonstrates cause-and-effect reasoning about speech-delivery issues, explicit diagnostic awareness (e.g., identifying which articulatory or pacing feature likely produced a given child response), and a

concrete, specific plan for pedagogical adjustment rather than a generic intention.

Coding proceeds entry-by-entry and, for each student, is aggregated across the semester to characterize trajectories (e.g., a student moving from predominantly surface-level entries early in the term toward predominantly deep critical entries by its conclusion). A comparative summary of the two poles of the continuum is presented in Table 2 (Section 4.2).

Consistent with standard criteria for qualitative rigor (Lincoln & Guba, 1985), trustworthiness in this method should be established through: (a) credibility, via an explicit, documented coding scheme applied consistently across entries and, ideally, cross-checked by a second coder; (b) dependability, via the standardized four-tier prompt structure, which reduces variation attributable to differing entry formats; and (c) confirmability, via retention of the original journal texts as an auditable data trail. Researchers implementing this method in a specific study are encouraged to report inter-rater agreement where a second coder is used.

Implementation of the method in any specific cohort should follow standard human-subjects protections applicable to the host institution, including informed consent of participating student-teachers, protection of the identities of children

present in described sessions (e.g., use of pseudonyms or omission of identifying detail within journal entries used for research purposes), and institutional ethical approval where journal content is analysed for publication beyond the supervisory relationship itself.

RESULTS AND DISCUSSION

Sustained engagement with the four-tier structure is theorized to function as a self-diagnostic engine. By systematically addressing Questions 1 and 2 after every session, pre-service teachers are repeatedly redirected from passive speech delivery toward active self-monitoring, developing heightened sensitivity to parameters that are especially consequential for hearing-impaired learners: articulation clarity, phonetic pacing, voice modulation, and the coordination of non-verbal and labial speech cues. Because the same four questions recur after every session, the journal also creates a comparable longitudinal record in which a supervisor — or the student themselves — can trace whether these sensitivities are strengthening across the semester rather than remaining static.

Table 2 summarizes the qualitative distinction between the two poles of the reflective-depth continuum used in content analysis, together with their theorized implications for the development of speech-pedagogical competence.

Table2. Levels of reflection and their theorized relationship to speech-pedagogical competence

Level of Reflection	Structural Characteristics	Theorized Impact on Speech Competence and Diagnostic Mastery
Surface-Level Reflection	Descriptive; focuses on external classroom conditions; lacks self-critique or root-cause analysis	Slower development of speech-methodological skills; difficulty adapting when a speech model fails to achieve its intended effect
Deep Critical Reflection	Analytical; identifies specific speech-delivery flaws; evaluates child reception explicitly; formulates adaptive, concrete strategies	Theorized acceleration of professional growth; higher diagnostic accuracy; more conscious, deliberate control over speech modelling

To make the coding distinction concrete, the following illustrative (composite, non-attributed) examples contrast how the same classroom moment might be rendered at each level of reflection:

- Surface-level rendering: "Today I worked with the child on the sound /s/. The child repeated after me several times. The session went as planned."

- Deep critical rendering: "Today, when modelling /s/, I noticed my pacing was too fast in the first repetitions, and the child's attempts showed the same rushed articulation — suggesting the child was mirroring my tempo rather than the target sound quality. When I slowed my delivery and exaggerated lip position in the second half of the session, the child's repetitions became noticeably clearer. Next session, I

will deliberately slow my initial model before requesting any repetition, rather than only correcting afterward."

The second excerpt exhibits precisely the features specified in Section 3.6: causal reasoning linking teacher behaviour to child outcome, diagnostic specificity, and a concrete forward plan — the pattern this paper argues should be actively cultivated, rather than left to emerge incidentally, through the standardized four-tier structure.

Content analysis across a semester-long portfolio is theorized to reveal a directional relationship between the depth of student reflection and indicators of professional competence:

- Students whose entries increasingly reflect deep critical analysis are expected to demonstrate correspondingly higher diagnostic skill in direct interaction with hearing-impaired children, since the habit of diagnosing one's own speech in writing is theorized to transfer into real-time diagnostic attention during teaching.
- Systematic evaluation of corrective-plan steps (Question 3) is theorized to translate directly into more adaptive lesson planning (Question 4), since the journal structurally forces each evaluative judgement to be followed by a specific behavioural commitment, closing the loop between diagnosis and action.

These relationships are presented as theoretically motivated interpretive claims arising from the design logic of the instrument and from the broader reflective-practice literature; their empirical verification — for instance, through statistical association between coded reflective depth and independently rated teaching performance — is identified as a priority for future research (Section 5.3).

These findings and design principles align closely with the core logic of Japan's Lesson Study framework, in which teachers collaboratively plan, observe, and critically analyse lessons in order to consciously refine their teaching techniques (Fernandez & Yoshida, 2004; Lewis et al., 2006). The Reflection Journal adapts this reflective methodology to an individual, continuous format suited to the constraints of a pre-service surdopedagogy practicum, in which peer co-observation is not always institutionally available. Structurally, it transforms routine practical exercises into conscious, cyclical learning episodes, enabling future deaf educators to refine their speech-pedagogical activity intentionally rather than incidentally — extending an internationally recognized model of structured professional

inquiry into a domain, and an individual format, in which it has not previously been systematically documented.

DISCUSSION

The findings support the broader theoretical claim, following Schön (1983) and Boud et al. (1985), that reflective capacity is not a fixed trait but a structurable, trainable habit. In the surdopedagogical context specifically, the study suggests that the object of reflection matters as much as its frequency: a generic reflective prompt ("How did the lesson go?") does not reliably direct attention to the specific diagnostic relationship between teacher speech and child perception, whereas the four-tier structure used here is purpose-built to do so.

For teacher-education programmes in surdopedagogy and related special-education fields, the method offers a low-cost, curriculum-embeddable mechanism for simultaneously (a) developing pre-service teachers' metacognitive control over their own speech delivery and (b) generating an auditable qualitative data corpus that supervisors can use for formative feedback and programme-level evaluation. Because the structure is domain-general in form (observation–perception–evaluation–planning) while domain-specific in content (speech delivery and child perception), it may be adaptable to adjacent fields — such as speech-language therapy training or other communication-disorder education programmes — with minimal modification of the guiding questions.

Several limitations should be acknowledged. First, as noted in Section 3.1, the relationships proposed between reflective depth and diagnostic competence are, at this stage, theoretically and qualitatively motivated rather than statistically demonstrated; the paper does not present inferential statistics linking coded reflective level to independently measured teaching outcomes, and such validation is an important next step. Second, journal-based data are self-reported, and entries may be shaped by students' awareness that a supervisor will read them, introducing potential social-desirability effects that should be addressed methodologically (e.g., through triangulation with independent classroom observation) in future implementations. Third, qualitative content analysis of this kind benefits from inter-rater coding to strengthen credibility; single-coder analysis, where used, should be reported as a limitation. Finally, the four-tier structure, while designed for

surdopedagogy, has not yet been formally validated across multiple institutions or cultural-linguistic contexts, and its transferability beyond the setting described here remains to be tested.

Future work should pursue: (a) empirical studies correlating coded reflective depth with independently rated teaching performance or child outcome measures; (b) inter-rater reliability studies of the surface/deep coding scheme; (c) comparative studies examining whether the structured four-tier format produces deeper reflection than unstructured journaling within the same population; and (d) cross-institutional replication to test the generalizability of the method beyond a single training programme.

CONCLUSION

This paper has presented the Reflection Journal as a structured qualitative instrument for cultivating and evaluating speech-pedagogical competence in pre-service deaf educators. By embedding a standardized four-tier reflective model — self-observation, perception analysis, corrective-strategy evaluation, and action planning — into practical training, higher-education institutions can create a curriculum-embedded mechanism for fostering the reflective-diagnostic indicators essential to special-education professionals. The method's structural logic, grounded in Schön's theory of reflective practice and convergent with the internationally recognized Lesson Study tradition, offers a transferable model for integrating reflective journaling into surdopedagogy curricula, bridging theoretical knowledge and adaptive, child-centred clinical practice. Its central contribution is domain-specificity: unlike generic reflective prompts, the four-tier structure directs pre-service teachers' attention precisely toward the diagnostic relationship between their own speech and the hearing-impaired child's perception of it — the relationship that defines professional competence in this field. Systematic empirical validation of the theorized relationship between reflective depth and diagnostic mastery remains an important direction for future research.

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