<Original Article>

Facilitation Elements That Elicit Learner Insights in Pair Reflection

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ABSTRACT

Background: Reflection is a practical way of thinking enabling nurses to critically examine their own practice. This study aimed to identify facilitation elements that elicit learners' insights during pair reflection between a learner and a facilitator.

Methods: Three learner–facilitator pairs participated after attending a reflection training course. Learners first conducted self-reflection, and subsequently engaged in pair reflection. Post-hoc facilitator interviews were also conducted. Transcripts and behavioral observations were analyzed to categorize support techniques, behaviors, and strategies.

Results: All pairs generated new insights during pair reflection. Support techniques clustered into questioning, feedback, and listening. Nonverbal behaviors influenced learners' responses; frequent questioning increased learner talk, whereas excessive personal storytelling sometimes suppressed reflection. Support strategies comprised nine categories, including promoting awareness of thinking and multi-perspective inquiry.

Conclusions: Effective pair reflection requires intentional use of questioning, calibrated feedback, and empathic listening, supported by nonverbal behaviors that ensure psychological safety. These elements should be incorporated into facilitator training to strengthen reflective learning in nursing practice.

INTRODUCTION

Reflection is a practical mode of thinking in which individuals examine their experiences as if viewing themselves in a mirror, allowing for a broader perspective of their actions and thoughts. Schön proposed a model of reflective practice in which practitioners reconsider the framing of a problem in response to the uniqueness of clients and evolving situations, thereby generating new understandings, judgments, and actions [1]. In this model, unexpected reactions within a situation evoke a sense of surprise, prompting practitioners to shift their attention toward previously unexamined perceptions and judgments. This process leads to the reconstruction of problem-solving approaches and situational understanding, underscoring reflection as a vital form of practical thinking.

As a learnable skill, reflective thinking is refined through clinical practice, ultimately contributing to the improved quality of nursing care [2]. Given the increasing diversity and complexity of contemporary nursing, the ability to respond appropriately to varying clinical situations has become essential, making critical self-reflection and evalua-

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tion indispensable for nurses.

However, when reflection involves revisiting failures, it may inadvertently harm self-esteem, diminish motivation through self-criticism, or evoke aversion toward the profession [3]. Literature suggests that effective reflection depends on relationship-building, the presence of experienced facilitators, and a safe, non-judgmental environment [4]. These findings highlight that facilitator intervention is critical; specifically, behavioral support from facilitators is essential to elicit effective reflection from learners.

Behavioral analysis, a discipline grounded in the principle that specific antecedent events evoke behaviors followed by consequent events, conceptualizes this as the three-term contingency [5]. For example, if a learner expresses a new insight and the facilitator subsequently provides positive feedback or praise, leading to further insights, the facilitator's response can be interpreted as a reinforcing stimulus. Such behavioral perspectives, known as applied behavior analysis, have been widely utilized in healthcare and education [6, 7]. In the field of education, peer support and group discussions have been reported as methods for supporting reflection [8, 9]. In nursing, reflection through paired work and group approaches has also been documented [10]. Although educational interventions for facilitators—such as coaching for preceptors of novice nurses [11] and researcher-led facilitation training programs [12]—have been reported, these have not examined the relationship between facilitation and learner outcomes. Practical research on reflective support in clinical nursing settings therefore remains an important area for future investigation [13].

Developing competent facilitators is essential for promoting effective reflection. Establishing facilitator training programs may enable both learners and facilitators to engage in reflection within a safe, collaborative environment that fosters clinical insight. Accordingly, this study aims to identify the specific elements that elicit learner insights by analyzing recorded pair reflection sessions.

MATERIALS AND METHODS

Definitions

This study adopted the following operational definitions: "support techniques" refer to the specific verbal and nonverbal methods directly employed by facilitators during interactions with learners; "support strategies" refer to the broader behavioral approaches and decision-making principles selected by facilitators to guide the reflective process effectively.

Participants

Participants comprised six nurses (three learner–facilitator pairs) who completed a reflection training program at Hospital A. The three learners had 3–5 years of nursing experience, while the three facilitators had 11–18 years of experience. All pairs belonged to the same institution and were acquainted with each other. Pairs 1 and 2 were from different units, while Pair 3 belonged to the same unit but worked on different teams. All participants were purposively paired to ensure that there was no direct supervisory or working relationship between the learner and the facilitator.

The training program comprised lectures on the concept of reflection, essential reflective skills, practical approaches to reflection, and strategies for supporting reflective dialogue. Essential skills included self-awareness, description, critical analysis, evaluation, and synthesis. Practical reflection was introduced using examples based on Gibbs' Reflective Cycle, a six-stage model designed to support experiential learning.

Data Collection

Following the training, learners first completed a self-reflection using the reflection sheet provided during the program. They subsequently engaged in pair reflection with a facilitator using the same sheet. Structured according to Gibbs' model, the sheet included sections on case overview, rationale for case selection, description of the situation, evaluation of practice, analysis of practice, reflection, and action plan.

Pair reflection sessions were conducted in a private room with an L-shaped seating arrangement, expected to last approximately 30 minutes, and were video-recorded. At the beginning of each session, learners provided facilitators with a copy of their completed reflection sheet. After each session, facilitators participated in semi-structured interviews, audio-recorded, exploring moments they perceived as contributing to learner insights, facilitation techniques considered effective, learner behaviors that influenced their own actions, and their thoughts, emotions, and personal tendencies.

Insights from self-reflection were extracted from the "Reflection" section of the learners' sheets. Insights gained during pair reflection were identified from verbatim transcripts of the recorded sessions.

Data Analysis

The duration of each pair reflection session was calculated using timestamps from the video recordings. Utterance counts for facilitators and learners were obtained by converting all transcripts into hiragana, and tallying the total characters. Support techniques were analyzed by extracting facilitator utterances from the pair reflection transcripts, and categorizing them based on content similarity. Frequencies were calculated at the subcategory level. Facilitator behaviors and learner responses were analyzed using video data, focusing on facilitator gaze, posture, demeanor, facial expressions, and corresponding learner reactions. To ensure credibility, two researchers were assigned to each of the

verbal and non-verbal data for independent coding. Discrepancies were first resolved within each pair, and then all four researchers engaged in iterative discussions until a full consensus was reached.

Support strategies were analyzed using verbatim transcripts of facilitator interviews. Statements describing strategies or methods perceived to elicit learner insights were categorized based on similarity. Member checking was conducted to verify that interpretations accurately reflected participants' intentions. Credibility was further ensured through iterative discussions among researchers until consensus was reached.

Ethical Considerations

This study was approved by the Research Ethics Committee of Osaka Medical and Pharmaceutical University (Approval No. 2020-094). All participants received written and verbal explanations of the study's purpose, significance, and procedures, and provided written informed consent.

RESULTS

Duration of Pair Reflection Sessions and Number of Utterances

The duration of the sessions was 41 minutes 08 seconds for Pair 1, 63 minutes 26 seconds for Pair 2, and 72 minutes 12 seconds for Pair 3. The number of utterances by facilitators and learners, respectively, was 5,056 and 6,414 for Pair 1; 11,420 and 3,719 for Pair 2; and 6,630 and 11,894 for Pair 3.

Insights Gained Through Pair Reflection

In all three pairs, pair reflection elicited new insights that had not emerged through self-reflection alone. **Pair 1** identified the "importance of symptom prediction and immediate response," alongside new insights regarding the "necessity of sharing medical history" and "informing other staff members" (e.g., prior history needed to be shared within the team; information should have been disseminated to other staff). **Pair 2** highlighted the "importance of rapid care tailored to developmental stages," while additionally "confirming the validity of the basic support provided" and the need to "engage with families by anticipating their feelings" and everyday difficulties. **Pair 3** recognized the "importance of communicating the nurse's perspective," while further reflecting on their "persistence in solitary problem-solving" and "feelings of pressure," leading to the new insight that "team-based problem-solving is appropriate" and it is acceptable not to solve problems alone.

Facilitators' Support Techniques (Table 1)

Analysis of the 330 data units identified 16 codes, 8 subcategories, and 3 categories.

[Questioning]—comprising fact-, thought-, and meaning-focused questions—was used to elicit the learner's perceptions and emotions. This technique was the most frequent in Pair 1 (74.4 %) and Pair 3 (50.0 %). Notably, "fact-focused questioning" accounted for over 20 % of the techniques in all pairs, serving as the foundation for situational awareness. **[Feedback]** included experience-based advice and affirmation of practice; this was the most utilized technique in Pair 2 (41.9 %). **[Active Listening]** facilitated the learner's narrative through back-channeling and empathy, present across all pairs (18.9–34.4 %).

Facilitators' Behaviors and Learners' Responses (Table 2)

As summarized in **Table 2**, the three pairs demonstrated distinct facilitation styles based on their non-verbal engagement and adherence to protocol:

Pair 1: Structure-Oriented This pair prioritized proce-

Table 1 Definitions and Frequencies of Support Techniques

Category	Subcategory (Description)	P1 (%)	P2 (%)	P3 (%)
Questioning	Total	74.4	38.4	50.0
	(Fact) Confirming events and practice	55.5	28.3	20.5
	(Thought) Ideas during/after practice	8.9	6.7	15.6
	(Meaning) Interpretation of actions	10.0	3.4	13.9
Feedback	Total	6.7	41.9	15.6
	(Advice) Experience-based suggestions	2.2	23.9	9.0
	(Affirmation) Acknowledging strengths	4.5	18.0	6.6
Active Listening	Total	18.9	19.7	34.4
	(Back-channeling, Empathy, Repetition)	18.9	19.7	34.4
Total	(n = 330)	100	100	100

Table 2 Facilitator behaviors and learner responses

	Pair 1	Pair 2	Pair 3
gaze	Looks down mostly; rare eye contact. Looks at learner for praise.	Frequent eye contact while speaking.	Alternates between learner and notes
posture/attitude	Body not directed toward learner; faces ahead. Claps when praising.	Body mostly oriented toward learner.	Alternates orientation between learner and downward; uses hand gestures. If talk is off-case, remains silent for > 10 seconds.
Facial expression	Occasional smiles; generally serious.	Frequent smiles; soft expression.	Stern or wry smiles when unconvinced; smiles during good reflection.
Learner's responses	Wry smiles at mechanical pace; clouds/stalls when sheet flipped; smiles when praised.	Faces facilitator when talking/listening; smiles even during off-case talk.	Faces forward; looks at facilitator when they speak. Uses hand gestures and eye contact for emphasis.

Table 3 Facilitator support strategies

Category/Subcategory
1. Support policy to elicit insights • Promoting insight through listening; Promoting insight by transmitting case-related experience
2. Environment enabling focus on case discussion • No need to probe because we know each other; Shared ward/patient context aided progress
3. Grasp of case and learner's tasks • Understanding the case; Grasp of learner's tasks
4. Creating a comfortable atmosphere • Creating an atmosphere where gripes can be shared; Using easy-to-speak tone and expressions
5. Promoting awareness of thinking in practice • Inferring true feelings; Eliciting in-practice thinking; Empathetic listening; Intentional positive feedback
6. Recalling relevant experiences • Natural feelings elicitation; Own thinking tendencies; Personal rules/others' acts; Similar cases
7. Advice based on experiential knowledge for tasks • Advice on support methods based on experience; Confident advice based on experience
8. Multi-perspective, exploratory questioning • Multi-causal query; Situational-view query; Word/behavior-factor query; Practice-meaning query
9. Confirming and meaning-making of learners' reactions • Capturing learners' reactions; Meaning-making of learners' reactions

dural adherence to the reflection sheet. While mutual gaze was infrequent, the facilitator maintained learner motivation through explicit positive reinforcement. **Pair 2**: Relationship-Oriented This pair emphasized interpersonal rapport through consistent non-verbal engagement. By minimizing reliance on the reflection sheet, the facilitator fostered a receptive environment that enhanced psychological safety. **Pair 3**: Strategically Focused This pair employed a selective approach to engagement. By modulating non-verbal cues—such as contrasting a downward gaze with firm eye contact—the facilitator effectively regulated the learner's focus and deepened the reflective process.

Facilitators' Support Strategies (Table 3)

Data analysis of the 59 data units yielded 42 codes, 24 subcategories, and 9 categories, as detailed in **Table 3**.

While most of these categories were commonly observed across all three pairs, a distinct divergence in the emphasis of specific strategies was noted depending on the facilitators' underlying support policies (Category 1). Specifically, the facilitator prioritizing "transmitting case-related experience" predominantly employed "Advice based on experiential knowledge for tasks" (Category 7). In contrast, those prioritizing "promoting insight through listening" intentionally focused on "multifaceted exploratory questioning" to prioritize the learner's own narrative. These findings encompass diverse facilitative strategies, including receptive approaches through active listening, advisory strategies grounded in clinical experience, and multifaceted exploratory questioning. Overall, the results illustrate how facilitators strategically integrated verbal and non-verbal techniques to address learners' challenges and foster new insights.

DISCUSSION

This study analyzed how support techniques, behaviors, and strategies facilitated learners' insights during pair reflection. Particular focus was placed on the emergence of new insights—those not attained through self-reflection—and the underlying facilitation elements.

The Role of Support Techniques

Three techniques—questioning, feedback, and active listening—contributed to insight development. Questioning addressed facts, thoughts, and meanings, corresponding to frameworks by Schön [1], Brookfield [14], and Mezirow [15]. Specifically, fact-focused questioning supported the description of experience [1]; thought-focused questioning facilitated making implicit assumptions visible [14]; and meaning-focused questioning reflected the reconstruction of experience through transformative learning [15]. While feedback based on clinical experience supported behavioral improvement, personal narratives unrelated to the learner's case hindered deeper reflection. Active listening enhanced psychological safety, fostering the trust and emotional stability necessary to articulate feelings [16], thereby allowing learners to revisit experiences more deeply.

Influence of Facilitator Behaviors on the Reflective Process

Nonverbal behaviors—gaze, posture, and facial expressions—significantly influenced reflection depth. In Pair 1, a continuous focus on the reflection sheet created a mechanical interaction and learner tension; however, subsequent praise and smiles functioned as reinforcement [7]. In Pair 2, warm expressions and eye contact created rapport, yet frequent unrelated personal storytelling by the facilitator limited the learner's opportunities for reflection. In Pair 3, the facilitator adjusted gaze and posture according to the dialogue, using expressive behaviors during meaning-focused questioning, and silence to redirect the conversation when necessary. These findings suggest that effective reflection requires the intentional use of nonverbal behaviors to support reflective engagement.

Influence of Support Strategies on the Quality of Reflection

Support strategies shaped the application of techniques and the direction of reflection. Reflection involves reconstructing experience through both "reflection in action" and "reflection on action" [1]. As shown in the results, the divergence in specific strategies—choosing between "advice based on experiential knowledge" and a conscious focus on "multifaceted questioning"—indicates that facilitators intentionally modulated their interventions based on their support policies (Category 1). Strategies prioritizing multifaceted questioning (Pairs 1 and 3) effectively promoted learner verbalization by deliberately refraining from personal narratives to prioritize the learner's own voice. Whereas strategies centered on sharing personal experiences (Pair 2) led to excessive facilitator talk, potentially restricting the learner's own articulation. Establishing psychological safety, defined by Edmondson [17] as a shared belief that interpersonal risk-taking is safe, was essential. Furthermore, familiarity and shared workplace context facilitated focused discussion by reducing the need for redundant explanations, contrary to the initial assumption that unfamiliar pairs would be ideal.

Implications for Facilitator Development

Facilitators must intentionally apply questioning, feedback, and active listening to foster insights. Questioning is vital for deepening critical reflection. Additionally, facilitators should deliberately employ nonverbal behaviors (e.g., gaze, silence) to support the narrative process. While experience-based feedback is valuable, it must remain relevant to the learner's case. Finally, shared workplace contexts should be considered when designing facilitator training programs to enhance reflective efficiency.

This study is limited by its small sample size from a single institution. Future research should examine a broader range of clinical settings to generalize these facilitation elements.

CONCLUSION

This study analyzed facilitators' behaviors, thought processes, and strategies in pair reflection settings, along with learners' responses, to identify elements that promote reflective insight. The findings demonstrated that pair reflection elicited new insights not achieved through self-reflection, and that appropriate use of questioning, feedback, and active listening was effective.

Nonverbal behaviors such as eye contact, posture, and facial expressions were found to either facilitate or inhibit learners' narratives, underscoring the importance of their intentional use. Post-interview analyses further revealed that facilitation strategies played a key role in promoting learners' awareness of their own thinking, and in guiding multifaceted problem exploration. Overall, the results indicate that facilitator development should emphasize the integrated use of support techniques and nonverbal behaviors, alongside strategies that ensure psychological safety and encourage deep experiential inquiry. Systematizing these elements and incorporating them into training programs may contribute to enhancing nurses' facilitation skills in supporting reflective practice.

DISCLOSURE STATEMENT

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AUTHOR CONTRIBUTIONS

All authors contributed to study conception and design; data collection, analysis, and interpretation; manuscript drafting; and approval of the final version.

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