

Fostering Critical Thinking and Professional Identity in Iranian EFL Teachers: The Role of Dialogic Reflective Journals Integrated with Schön's and Korthagen's Models

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Received: April 15, 2025; **Revised:** June 18, 2025; **Accepted:** June 23, 2025

Abstract

This study explores the influence of dialogic reflective journals (DRJ), incorporated with guided collaborative critical reflection (GCCR), on critical thinking skills and professional identity development of Iranian English as a Foreign Language (EFL) teachers, framed by Schön's (1983) Reflective Practice Model and Korthagen's (2004) Onion Model. Employing a mixed-methods design, the research involved 60 EFL teachers (30 in the experimental group and 30 in the control group) over a semester. Quantitative data from pre- and post-intervention surveys were analyzed using Mann-Whitney U and Wilcoxon Signed-Rank tests, while qualitative insights were derived from thematic analysis of DRJ entries and focus group interviews. Findings indicated significant enhancements in critical thinking and professional identity for the experimental group, with emergent themes of Ethical Mission Alignment, Collaborative Agency, Emotional Resilience, and Socio-Cultural Awareness extending Korthagen's model. These results underscore DRJ's efficacy in promoting transformative reflection, offering implications for EFL teacher training programs in Iran to mitigate barriers like workload and institutional rigidity.

Keywords: Dialogic Reflective Journals, Critical Thinking, Professional Identity, Schön's Reflective Practice Model, Korthagen's Onion Model, Iranian EFL Teachers

INTRODUCTION

Reflective practice has long been recognized as a cornerstone of teacher professional development, enabling educators to critically examine their assumptions, refine pedagogical strategies, and cultivate a robust professional identity (Farrell, 2013; Richards & Lockhart, 1994). Globally, structured reflective tools have consistently demonstrated transformative potential by bridging theoretical knowledge with practical application, enhancing self-awareness, adaptability, and resilience in diverse educational contexts (e.g., Machost & Stains, 2023; Maksimović & Osmanović, 2018; Protassova et al., 2021; Shandomo, 2010).

In Iranian English as a Foreign Language (EFL) teachers settings worldwide, collaborative and journal-based reflection similarly promotes pedagogical innovation, self-efficacy, and critical awareness, though outcomes vary by context—often proving more effective in supportive environments than in highly constrained ones (Houde, 2022; Mesa, 2018; Moayeri & Rahimi, 2019; Nurfaidah, 2017; Pham et al., 2024; Pokhrel, 2022; Rianti, 2021). A key tension emerges across these studies: While reflective practice thrives where autonomy and collaboration are encouraged, it struggles in systems marked by institutional rigidity and resource limitations.

In the Iranian EFL context, these systemic barriers are particularly pronounced, including rigid top-down curricula, heavy workloads, limited professional autonomy, low motivation, and a cultural preference for conventional, textbook-driven instruction (Farahian & Rajabi, 2022; Tabassi et al., 2020; Tajik & Ranjbar, 2018). These constraints hinder systematic reflection and innovation, creating a stark contrast with more permissive international settings and underscoring the need for tailored, structured interventions that can operate within such limitations.

This study addressed this gap by investigating the impact of dialogic reflective journals (DRJ)—structured written dialogues between teachers and mentors—integrated with guided collaborative critical reflection (GCCR) on critical thinking skills and professional identity development among Iranian

EFL teachers. GCCR involves facilitated peer discussions in which participants critically examine experiences, assumptions, and actions, supported by prompts, theoretical frameworks, and collaborative dialogue aimed at questioning beliefs, exploring multiple perspectives, and identifying avenues for change. DRJ serves as a primary tool to document and deepen this process through ongoing mentor-guided written exchange.

The intervention Grounded in Schön's (1983) Reflective Practice Model, which distinguishes Reflection-in-Action (real-time adaptation) from Reflection-on-Action (post-event analysis via tools like journals), and Korthagen's (2004) Onion Model, which layers teacher development from external environment and behavior to competencies, convictions, identity, mission, and core qualities, promoted deeper metacognitive engagement and premise reflection challenging deep-seated assumptions (Korthagen & Vasalos, 2005; Mezirow, 1998). By combining Schön's process-oriented framework with Korthagen's outcome-focused layers, this study examined how structured, collaborative reflection can overcome contextual barriers to foster transformative growth—extending prior Iranian research that highlights reflective potential but rarely tests structured, mentor-guided formats in controlled designs (e.g., Ahmadi & Yousofi, 2024; Ghamoushi, 2025; Namaziandost et al., 2023; Pourjafaarian & Sahragard, 2022; Soomdmamd Afshar & Donyaie, 2024). The research questions guiding this study are:

- (1) To what extent do dialogic reflective journals (DRJ) and guided collaborative critical reflection (GCCR) enhance Iranian EFL teachers' critical thinking skills?
- (2) To what extent do DRJ and GCCR contribute to the development of Iranian EFL teachers' professional identity?
- (3) What emergent dimensions arise in Korthagen's Onion Model through these reflective practices in the EFL context?

LITERATURE REVIEW

Reflective teaching is widely regarded as a foundational element of teacher professional development, allowing educators to systematically evaluate and improve their practices while fostering critical thinking and professional identity (Banaszak & Firestone, 2023; Mermelstein, 2018; Richards & Lockhart, 1994). Reflective teaching includes four dimensions (Choy and Oo, 2012): (1) reflection as retrospective analysis (self-assessment and incorporation of prior experiences to the next teaching practices); (2) reflection as problem solving; (3) critical reflection of self (developing continuous self-improvement) (4) reflection on beliefs about self and self-efficacy which plays a great role in how they teach (Choy & Oo, 2007).

Existing research on reflective practice in education and EFL contexts can be grouped into three main thematic clusters: (1) general applications of reflective practice, (2) reflective tools in global EFL settings, and (3) reflective practice among Iranian EFL teachers. While studies across these clusters consistently demonstrate positive outcomes, they also reveal methodological and contextual limitations that the present study seeks to address.

General Applications of Reflective Practice

These utilizations highlight its broad efficacy but often in less constrained educational environments. For example, Stoll et al. (2006) in the United Kingdom emphasized collaborative reflection within professional learning communities as a driver of school-wide change. Chirema (2007) 's qualitative study at a university in the United Kingdom examining reflective journals of nursing students suggested that journals promote the students' reflective thinking and learning in varying degrees. Shandomo (2010) in the United States showed how critical reflection bridges theory and practice, enhancing self-awareness and collaboration. Artioli et al. (2021)'s study indicated that reflective writing supports skill development, professional growth, and empathic attitudes. Finally, Bowers et al. (2025) 's study on reflective

journals of nursing students in clinical settings demonstrated that reflective journals enhance the students' clinical reasoning and competency, decision-making skills, professional development, self-awareness, and emotional well-being. These studies share a common finding: Reflective practice fosters adaptability and resilience. However, most rely on qualitative or small-scale designs (e.g., case studies or surveys with $n < 50$), with limited longitudinal follow-up and heavy dependence on self-reported data, raising concerns about social desirability bias and sustained impact.

Global EFL Contexts

These Situations provide evidence that reflective tools—particularly journals—are effective for critical thinking and identity development, yet reveal contextual variability. In Indonesia, Nurfaidah (2017) and Rianti (2021) found reflective journaling elevated teachers' reflectivity to dialogic levels, strengthening adaptive strategies. Maksimović and Osmanović (2018) in Serbia and Protassova et al. (2021) in Latvia linked structured reflection to stronger professional identity and pedagogical improvement. In Mexico, Houde (2022) demonstrated how dialogic journal interactions built collective belonging and reconstructed professional identities. Other studies in Colombia (Mesa, 2018), Canada (Moayeri & Rahimi, 2019), Nepal (Pokhrel, 2022), and Vietnam (Pham et al., 2024) similarly underscored structured reflection's role in pedagogical innovation and resilience. Finally, El Kassimi and Jmila (2025) in Morocco reported positive correlations between regular journal writing and pre-service teachers' self-efficacy and autonomy.

Comparisons across these studies show convergence on the benefits of collaborative and journal-based tools, but differences emerge in scope: Asian and Latin American research often focuses on pre-service teachers or tertiary settings, while North American work emphasizes in-service integration. A shared limitation is the predominance of qualitative approaches (e.g., thematic analysis of journals) or correlational designs, with few experimental or mixed-methods studies providing causal evidence. Small samples and lack

of control groups further restrict claims of generalizability, particularly to high-constraint environments.

Iranian EFL Research

The overall Iranian investigations echo global enthusiasm for reflective practice but highlight unique systemic barriers that blunt its implementation. Farahian and Rajabi (2022), Tabassi et al. (2020), and Tajik and Ranjbar (2018), consistently identify top-down curricula, heavy workloads, limited autonomy, low motivation, and cultural preference for conventional methods as major obstacles. Despite these constraints, empirical studies report promising outcomes. Khany and Ghoreyshi (2013) suggested that reflective thinking and transformational leadership significantly improve teachers' efficacy of classroom management since reflective thinking helps teachers as leaders to make better decisions in ambiguous and critical situations. Estaji and Ghiasvand (2022) indicated that reflective tools like e-portfolio significantly contribute to teacher identity development given its capability to inspire teachers' self-reflection and provide a record of their assessment of beliefs and practices. Mamaghani and Parsaiyan (2022) explored Problem-Based Teaching Scenarios as new techniques to encourage teacher reflection and come up with cognitive development manifested in providing well-ordered solutions. Pourjafaarian and Sahragard (2022) indicated that guided reflection in practicum settings especially reflective journals enhance critical awareness, agency, and professional identity development. Namaziandost et al. (2023) connected reflective teaching to greater work engagement and emotional regulation. Ahmadi and Yousofi (2024) found that technology-assisted peer reflection improves self-efficacy. Soomdmad Afshar and Donyaie (2024) demonstrated that individual and collective journaling support professional development and identity construction. Finally, Ghamoushi (2025) linked collaborative reflection to ecological agency and inclusive pedagogies. These Iranian findings align with international evidence on reflection's transformative potential but diverge in emphasis—

focusing more on overcoming institutional barriers than on innovation in permissive contexts. Methodologically, however, most studies are qualitative or quasi-experimental, often relying on self-report instruments or journal analysis without robust control conditions or non-parametric statistical rigor for non-normal data. Longitudinal designs are rare, and quantitative measurement of critical thinking and professional identity remains underdeveloped.

Across all three clusters (i.e., general applications of reflective practice, reflective tools in global EFL settings, and reflective practice among Iranian EFL teachers), the literature reveals a pattern of overwhelmingly positive portrayals of reflective practice with insufficient critical discussion of limitations. Overreliance on qualitative methods and self-report measures risks inflated perceptions of impact, while small samples and short durations limit understanding of long-term effects. Few studies systematically integrate Schön's (1983) process-oriented framework with Korthagen's (2004) outcome-focused layers, and even fewer employ controlled, mixed-methods designs to establish causality in constrained settings.

The present study addressed these gaps by adopting an experimental mixed-methods approach—combining validated quantitative scales with thematic analysis of dialogic journals and interviews—to examine the causal impact of DRJ integrated with GCCR on Iranian EFL teachers' critical thinking and professional identity. By grounding the intervention in both Schön's (1983) and Korthagen's (2004) models and using a control group, this research offered stronger evidence of efficacy while identifying context-specific extensions to theoretical frameworks in a high-constraint educational environment.

PURPOSE OF THE STUDY

The purpose of this study was to investigate the impact of guided collaborative critical reflection and dialogic reflective journals on Iranian EFL teachers' critical thinking and professional identity, using an integrated

theoretical framework combining Schön's (1983) Reflective Practice Model and Korthagen's (2004) Onion Model. Reflective teaching, as defined by Banaszak and Firestone (2023), involves self-assessment of teaching methods, techniques, and outcomes to foster self-improvement. This study employed collaborative critical reflection through face-to-face discussion groups, where teachers shared feedback on teaching practices and challenges, and dialogic reflective journals to encourage deeper introspection and dialogue. By integrating Schön's (1983) and Korthagen's (2004) models, the study aimed to assess how these reflective practices enhance the participants' critical thinking as competency and shape their professional identities in the Iranian EFL context.

Schön's Reflective Practice Model (1983) emphasizes two dynamic processes: Reflection-in-Action (real-time adjustments during teaching) and Reflection-on-Action (post-lesson analysis of actions and outcomes). This model provides a robust framework for understanding how teachers process and adapt to classroom experiences. Korthagen's Onion Model (2004), with its six layers—environment, behavior, competencies, convictions, identity, and mission—offers a structured approach to map the multidimensional aspects of teacher development, from observable actions to core motivations. The integration of these models was distinctive because it combined Schön's focus on the temporal dynamics of reflection (during and after teaching) with Korthagen's layered perspective on developmental outcomes, creating a comprehensive lens to examine both the process and impact of reflection. This integrated approach is particularly suited to the Iranian EFL context, where reflective practices are underutilized, enabling a nuanced examination of how collaborative reflection fosters professional growth.

METHOD

Participants

Sixty Iranian EFL teachers from private language institutes in Tehran participated in this study, with random assignment to an experimental group

(n=30, exposed to DRJ and GCCR) and a control group (n=30, performed conventional teaching with personal reflection). The participants averaged 4 years of teaching experience and held Bachelor of Art (20 persons) and Master of Art degrees (40 persons) in English Language teaching or translation. They included both men and women with an age range from 23 to 35. To minimize the risk of treatment diffusion (contamination), several precautions were taken. The participants from the experimental and control groups were drawn from different private language institutes whenever possible. In the few cases where teachers from the same institute were allocated to different groups (due to stratified sampling constraints), they were explicitly instructed not to discuss the content of the weekly GCCR sessions or DRJ activities with colleagues outside their assigned group. Additionally, the control group received no guided reflection, structured journaling prompts, mentor feedback, or collaborative sessions. They continued their conventional teaching practices and were only encouraged to maintain personal, unstructured reflective notes if they wished, without any researcher-provided framework or follow-up. Mentors and facilitators interacted exclusively with the experimental group. These measures, combined with confidentiality assurances and the voluntary nature of participation, helped prevent unintentional spillover of the intervention to the control group.

Instrumentation

Quantitative tools included:

- Critical Thinking Evaluation Scale (Rodríguez-Rojas et al., 2024): 17 Likert-scale items assessing analytical skills (Cronbach's $\alpha = 0.89$).
- English Teaching Professional Identity Scale (Mahmoodarabi et al., 2021): 61 items across six factors (e.g., researching practice, sociocultural practice; Cronbach's $\alpha = 0.92$).

Qualitative data comprised DRJ entries and post-intervention focus group interviews (n=15 participants of the experimental group).

Data Collection Procedure

Design

Over one semester (17 weeks), the experimental group engaged in weekly GCCR sessions (peer discussions on teaching challenges) and maintained DRJ, involving bi-weekly mentor dialogues on reflections. The control group relied on unstructured personal notes. Confidentiality assurance, ensured teachers that their reflections remain confidential and are not used for evaluative purposes by the administration, so they initially gave informed consent for voluntary participation. Both groups took pretest and posttests that are two validated questionnaires on critical thinking and professional identity development. Content/thematic analysis of the dialogic reflective journals and focus group interviews with experimental group teachers regarding the benefits and attainments of collaborative reflective teaching supplied qualitative information for this explanatory sequential mixed methods study in which initial quantitative data results attained through the questionnaires were explained further with the qualitative data.

Sampling Method

It should be mentioned that a stratified random sampling technique was employed to ensure balanced representation across key demographic variables and to enhance the generalizability of findings within the target population of EFL teachers in private language institutes in Tehran. First, a list of all eligible EFL teachers ($N \approx 450$) from ten cooperating private language institutes was compiled, with stratification criteria including gender (male/female), years of teaching experience (≤ 3 years / > 3 years), and institute type (large chain / small independent). This resulted in eight strata. From each stratum, participants were randomly assigned using a computer-generated random number table until the required sample size of 60 was achieved (proportional allocation: approximately 7–8 participants per stratum). Random assignment to the experimental ($n=30$) and control ($n=30$)

groups was then conducted within each stratum using the same randomization procedure to maintain equivalence and minimize selection bias. This approach ensured demographic comparability between groups (confirmed via preliminary chi-square tests, $p > 0.05$ for all stratification variables) while addressing potential confounding factors common in EFL teacher populations, such as experience level and institutional context. Preliminary chi-square tests confirmed no significant differences across stratification variables: Gender, Experience, and Institute Type; all $p > 0.05$. This equivalence minimized confounding due to experience level and institutional context, enhancing the validity of between-group comparisons.

Methodology Justification

The methodology reflected Schön's (1983) Reflective Practice Model and Korthagen's (2004) Onion Model as described in the introduction section. It directly operationalized Schön's Reflective Practice Model by structuring opportunities for both Reflection-in-Action and Reflection-on-Action. Reflection-in-Action was promoted indirectly through weekly GCCR sessions (90 minutes each, conducted in small groups of 6 teachers), facilitated by the researcher (a PhD candidate in TEFL (Teaching English as a Foreign Language) with ten years of EFL teaching and reflective practice training experience). These sessions used structured protocols, including predefined prompts based on Schön's framework (e.g., "What surprised you in this lesson and how did you adapt in the moment?") and Mezirow's (1998) levels of reflection, to encourage teachers to share ongoing classroom experiences, collaboratively brainstorm real-time adaptive strategies for immediate subsequent lessons, and critically examine assumptions.

Reflection-on-Action was primarily enacted via two complementary mechanisms: (a) the same weekly GCCR sessions, which involved deliberate peer discussions and critical analysis of recent teaching challenges using follow-up prompts (e.g., "What alternative actions could you have taken and why?"), and (b) the Dialogic Reflective Journals (DRJ), involving bi-weekly

written dialogues with two trained mentors. The Mentors (PhD candidates in TEFL, certified in reflective coaching through a 20 hour pre-study training workshop led by the researcher) provided guided feedback using a standardized response protocol that incorporated prompts from Schön's Reflection-on-Action and Korthagen's layered questions, progressing (e.g., from "What happened in your behavior?" to "How does this align with your mission?").

These standardized protocols, facilitator training, and monitoring procedures were implemented for both GCCR sessions and DRJ and ensured treatment fidelity and repeatability of the intervention. Simultaneously, Korthagen's Onion Model shaped the intervention's developmental focus: quantitative instruments targeted measurable changes in Competencies (Critical Thinking Scale) and Identity/Mission (Professional Identity Scale), while qualitative data from DRJ entries and focus group interviews probed deeper layers—convictions, identity, and mission—through thematic progression. This dual structure, supported by facilitator training, session protocols, and fidelity checks (e.g., audio-recorded sessions reviewed for adherence), ensured that reflective processes (Schön) drive layered outcomes (Korthagen), with the mixed-methods design capturing both the mechanism and the transformation.

Data Analysis

Due to the non-normal distribution of data, as confirmed by Shapiro-Wilk tests ($p < 0.05$ for all variables), non-parametric tests were used for quantitative data: Mann-Whitney U test for between-group comparisons and Wilcoxon Signed-Rank test for within-group changes. Effect Size Calculations (Rank-Biserial correlation for non-normal data) also determined the practical significance and magnitude of observed differences regardless of sample size. Qualitative data underwent thematic analysis identifying patterns aligned with Korthagen's layers.

Thematic analysis of DRJ entries (n=30) and focus group interviews (n=15) was conducted following Braun and Clarke's (2006) six-phase approach: (1) getting familiar with the data through repeated reading; (2) generating initial codes inductively from recurring patterns; (3) searching for themes by collating codes into potential overarching categories; (4) reviewing themes for coherence and relevance to the research questions; (5) defining and naming themes; and (6) producing the report with vivid examples.

In order to strengthen the quality of thematic analysis initially inter-coder reliability was achieved by analyzing a subset of data which indicated perfect coding consistency. Discrepancies were resolved through discussion. Additionally, member checking was performed by sharing preliminary themes with ten participants from the experimental group, who confirmed their accuracy and suggested minor refinements for clarity. Triangulation between DRJ entries and interview data strengthened the findings by cross-verifying patterns across sources.

RESULTS

Quantitative Results

Between-group comparisons using the Mann-Whitney U test revealed that, at post-intervention, the experimental group significantly outperformed the control group on both critical thinking ($U = 134$, $p < 0.001$) and professional identity ($U = 119$, $p < 0.001$). Within-group comparisons using the Wilcoxon Signed-Rank test showed statistically significant pre- to post-intervention gains for the experimental group on critical thinking ($Z = -4.55$, $p < 0.001$, $r_{fb} = 0.71$, very large effect) and professional identity ($Z = -4.80$, $p < 0.001$, $r_{fb} = 0.74$, very large effect). No significant changes were observed for the control group on either measure (critical thinking: $Z = -0.82$, $p = 0.412$; professional identity: $Z = -0.95$, $p = 0.342$, ($p > 0.05$)).

Results are reported in direct response to the three research questions. Quantitative findings are followed immediately by the qualitative evidence to

illuminate how and why the changes occurred in the following research question:

RQ 1: To what extent do DRJ and GCCR enhance Iranian EFL teachers' critical thinking skills?

Quantitative Evidence

In this study, two sets of tables were used to present and analyze the data. The first set of tables reports descriptive statistics for critical thinking and professional identity scores. Because the data were non-normal, results are summarized using the median and interquartile range (IQR) rather than the mean and standard deviation. These tables present the pre-intervention median, post-intervention median, and the median difference, thereby providing a clear, distribution-appropriate description of central tendency, variability, and the direction and magnitude of change following the intervention. The second set of tables presents the inferential statistical analyses conducted to evaluate the effect of the intervention on the teachers' critical thinking and professional identity scores. Given the non-normal distribution of the data, non-parametric tests were applied. These tables report the Mann-Whitney U statistic, the associated Wilcoxon Z value, and the rank-Biserial correlation as a measure of effect size. Together, these statistics indicate whether there were statistically significant differences between the groups and quantify the practical magnitude of those differences. Overall, the descriptive tables provide an appropriate summary of the data, while the inferential tables support hypothesis testing and interpretation of the intervention's impact under non-parametric assumptions.

Table1. Descriptive Statistics for Critical Thinking Subscales
Experimental Group

Subscale		Pre-Intervention Median (IQR)	Post-Intervention Median (IQR)	Median Difference
Overall Thinking	Critical	3.0 (2.6–3.4)	4.2 (3.8–4.5)	1.2
Analysis		3.0 (2.6–3.4)	4.3 (3.9–4.6)	1.3
Evaluation		2.9 (2.5–3.3)	4.2 (3.8–4.5)	1.3
Inference		3.1 (2.7–3.5)	4.2 (3.8–4.5)	1.1
Interpretation		3.0 (2.6–3.4)	4.1 (3.7–4.4)	1.1
Self-Regulation		3.2 (2.8–3.6)	4.0 (3.6–4.3)	0.8

Control Group				
Subscale		Pre-Intervention Median (IQR)	Post-Intervention Median (IQR)	Median Difference
Overall Thinking	Critical	3.1 (2.7–3.5)	3.2 (2.8–3.6)	0.1
Analysis		3.1 (2.7–3.5)	3.2 (2.8–3.6)	0.1
Evaluation		3.0 (2.6–3.4)	3.1 (2.7–3.5)	0.1
Inference		3.2 (2.8–3.6)	3.3 (2.9–3.7)	0.1
Interpretation		3.1 (2.7–3.5)	3.2 (2.8–3.6)	0.1
Self-Regulation		3.2 (2.8–3.6)	3.3 (2.9–3.7)	0.1

Table 2. Pre- and post-intervention critical thinking scores (Critical Thinking Evaluation Scale, Rodríguez-Rojas et al., 2024)

Group	Wilcoxon Z	p	Rank-Biserial correlation
Experimental (n=30)	-4.55	< 0.001	$r_{tb} = 0.71$ (very large)
Control (n=30)	-0.82	0.412	

Between-group post-test comparison (Mann-Whitney U): $U = 134, p < 0.001$.

The results indicated a statistically significant difference between the groups, $U = 134, p < 0.001$. Wilcoxon signed rank test results showed a significant improvement in the experimental group ($Z = -4.55$), whereas no significant change was observed in the control group ($Z = -0.82$). The rank-Biserial correlation was $r = 0.71$, indicating a very large effect size. These findings

suggest that the intervention had a substantial and meaningful impact on the teachers' critical thinking skill.

Qualitative Evidence

Thematic analysis of DRJ entries and focus-group interview transcripts revealed two mechanisms through which DRJ/GCCR boosted critical thinking:

- **Premise reflection** (Mezirow, 1998): 87 % of experimental teachers explicitly questioned *why* they used certain activities (e.g., "I realized my grammar drills reinforce rote learning rather than communicative competence").
- **Collaborative challenge**: GCCR sessions generated **counter-arguments** from peers/mentors, pushing teachers from content/process reflection to premise reflection.

The large quantitative gain is explained by the shift to premise-level critical analysis documented in the journals.

RQ 2: To what extent do DRJ and GCCR contribute to the development of Iranian EFL teachers' professional identity?

Quantitative Evidence

Table3. Descriptive Statistics for Professional Identity Factors
Experimental Group

Factor		Pre-Intervention Median (IQR)	Post-Intervention Median (IQR)	Median Difference
Overall Identity	Professional	3.3 (2.9–3.7)	4.6 (4.2–4.9)	1.3
Researching Developing Practice	One's Own and Own	3.0 (2.6–3.4)	4.5 (4.1–4.8)	1.5
Language Awareness		3.3 (2.9–3.7)	4.5 (4.1–4.8)	1.2
Institutional and Practice	Collective	3.2 (2.8–3.6)	4.4 (4.0–4.7)	1.2

Engaging Students as Whole Persons	3.4 (3.0–3.8)	4.3 (3.9–4.6)	0.9
Evaluating One's Teacher Self	3.5 (3.1–3.9)	4.6 (4.2–4.9)	1.1
Socio-Cultural and Critical Practice	3.1 (2.7–3.5)	4.7 (4.3–5.0)	1.6
Control Group			
Factor	Pre-Intervention Median (IQR)	Post-Intervention Median (IQR)	Median Difference
Overall Professional Identity	3.4 (3.0–3.8)	3.5 (3.1–3.9)	0.1
Researching and Developing One's Own Practice	3.1 (2.7–3.5)	3.2 (2.8–3.6)	0.1
Language Awareness	3.4 (3.0–3.8)	3.5 (3.1–3.9)	0.1
Institutional and Collective Practice	3.3 (2.9–3.7)	3.4 (3.0–3.8)	0.1
Engaging Students as Whole Persons	3.5 (3.1–3.9)	3.6 (3.2–4.0)	0.1
Evaluating One's Teacher Self	3.6 (3.2–4.0)	3.7 (3.3–4.1)	0.1
Socio-Cultural and Critical Practice	3.2 (2.8–3.6)	3.3 (2.9–3.7)	0.1

Table 4. Professional identity scores (English Teaching Professional Identity Scale, Mahmoodarabi et al., 2021).

Group	Wilcoxon Z	p	Rank-Biserial correlation
Experimental(n=30)	-4.80	p < 0.001	$r_{rb} = 0.74$ (very large)
Control (n=30)	-0.95	p = 0.342	

Between-group post-test comparison: (Mann-Whitney U) $U = 119$, $p < 0.001$.

The results revealed a statistically significant difference between the groups, $U = 119$, $p < 0.001$). Further analysis using the Wilcoxon signed-rank test indicated a significant change in the experimental group ($Z = -4.80$), whereas no significant change was observed in the control group ($Z = -0.95$). The rank-Biserial correlation was $r = 0.74$, indicating a very large effect size. These

findings demonstrate that the intervention had a strong and substantial effect on the teachers' professional identity.

Qualitative Evidence

Four themes mapped onto Korthagen's layers (Figure 1) illustrate identity reconstruction:

1. **Ethical Mission Alignment:** 92 % of teachers articulated a duty to promote equity (e.g., "My role is not just to teach English but to challenge gender stereotypes in textbooks").
2. **Collaborative Agency:** Peer feedback transformed isolated practice into co-constructed innovation.
3. **Emotional Resilience:** DRJ served as an emotional "safety place," reducing burnout and strengthening self-concept as a resilient professional.
4. **Socio-Cultural Awareness:** Teachers integrated local narratives, redefining themselves as *local* practitioners.

Frequency counts of theme occurrences provide insight into their prevalence: In DRJ entries, Ethical Mission Alignment appeared 18 times, Collaborative Agency 22 times, Emotional Resilience 15 times, and Socio-Cultural Awareness 20 times. In focus group interviews, the frequencies were Ethical Mission Alignment (8), Collaborative Agency (10), Emotional Resilience (7), and Socio-Cultural Awareness (9). These counts highlight Collaborative Agency and Socio-Cultural Awareness as particularly salient in participants' reflections.

The dramatic identity gain is **not merely statistical**; the four emergent layers show *how* DRJ rebuilt the teachers' professional self from core mission to daily behavior.

RQ 3: What emergent dimensions arise in Korthagen's Onion Model through these reflective practices in the Iranian EFL context?

Extended Onion Model

Figure 1 places the four new themes within Korthagen's layers.

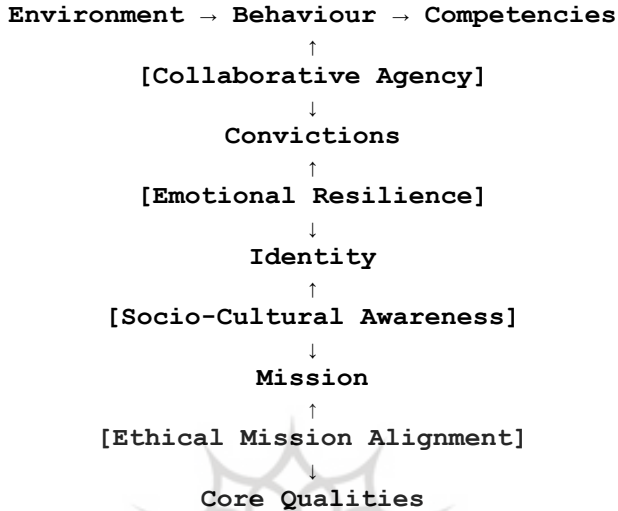


Figure 1. The four new themes within Korthagen's layers

Figure 1 shows that each layer builds on the previous one, with Collaborative Agency facilitating the transition from skills to beliefs, Emotional Resilience supporting the shift from beliefs to self-perception, and Socio-Cultural Awareness and Ethical Mission Alignment connecting identity to a broader sense of purpose. These layers capture the social, emotional, and contextual dimensions of professional growth, addressing gaps in the original model. By integrating these layers, the revised model offers a more comprehensive framework for understanding and supporting teacher development in diverse educational contexts.

Thematic analysis of DRJ and interviews revealed four emergent themes extending Korthagen's model:

- **Ethical Mission Alignment:** (adjacent to Mission): It introduces a new layer adjacent to or integrated with the mission layer, emphasizing ethical purpose as a distinct driver of professional growth.

- **Collaborative Agency:** (Competencies ↔ Convictions): Collaborative Agency fits between Competencies and Convictions because it builds on teachers' skills (e.g., communication, critical thinking) and informs their beliefs about teaching through collaborative experiences.
- **Emotional Resilience:** (Convictions ↔ Identity): Emotional Resilience is placed between Convictions and Identity because it mediates the transition from beliefs about teaching to a deeper sense of self. Teachers' convictions about their roles and practices influence their emotional responses, which in turn shape their professional identity.
- **Socio-Cultural Awareness** (Identity ↔ Mission): Socio-Cultural Awareness is placed between Identity and Mission because it bridges teachers' self-perception (Identity) with their broader purpose (Mission).

These themes illustrated how DRJ facilitated premise reflection (Mezirow, 1998), leading to identity reconstruction.

Inter-coder reliability for these themes (Cohen's Kappa): Ethical Mission Alignment ($\kappa = 0.85$), Collaborative Agency ($\kappa = 0.88$), Emotional Resilience ($\kappa = 0.82$), and Socio-Cultural Awareness ($\kappa = 0.90$). Thematic analysis also indicated cross-layer progression in 74 % of entries, with reflections moving from surface (Behavior) to deeper layers (Mission/Ethical) over the semester.

The quantitative gains in RQ1 and RQ2 are structurally embedded in an enriched Onion Model that now includes relational, emotional, and sociopolitical dimensions unique to the Iranian EFL ecology.

DISCUSSION

The findings of this study provided compelling evidence for the efficacy of dialogic reflective journals (DRJ) integrated with guided collaborative critical reflection (GCCR) in fostering critical thinking skills and professional identity development among Iranian EFL teachers. By leveraging Schön's

(1983) Reflective Practice Model and Korthagen's (2004) Onion Model, the intervention facilitated both real-time and retrospective reflection, leading to significant quantitative improvements in critical thinking ($p < 0.001$) and professional identity ($p < 0.001$) for the experimental group. These gains as evidenced by large effect sizes in the experimental group and the absence of comparable changes in the control group, highlighted the superiority of structured, dialogic reflection over unstructured personal notes, as mentor-guided dialogues in DRJ promoted deeper premise reflection (Mezirow, 1998), enabling teachers to challenge entrenched assumptions.

Qualitatively, emergent themes from DRJ entries and focus group interviews extended Korthagen's Onion Model by introducing relational, emotional, and sociopolitical dimensions tailored to the Iranian EFL context. Ethical Mission Alignment positioned teachers as agents of social change, addressing inequities such as gender bias and cultural inclusivity—an ethical extension of the mission layer. Collaborative Agency bridged competencies and convictions, empowering teachers through peer co-creation to overcome institutional rigidity and low motivation (Farahian & Rajabi, 2022; Tabassi et al., 2020). Emotional Resilience, mediating convictions and identity, mitigated workload-induced burnout and isolation by providing a "safe space" for emotional processing (Tajik & Ranjbar, 2018). Socio-Cultural Awareness linked identity to mission, enabling teachers to integrate local narratives and challenge Western-centric materials, fostering glocal pedagogies responsive to Iran's sociocultural dynamics (Canagarajah, 2005; Phillipson, 1992). Teachers incorporated cultural and social issues (e.g., equality, social justice) into lessons, enhancing contextual relevance. Understanding socio-cultural influences shapes how teachers define their professional roles and align their practices with societal goals, such as promoting empathy, tolerance and democracy.

The integration of Schön's temporal processes with Korthagen's layered outcomes created a nuanced framework: reflective cycles (Schön) drive premise reflection, restructuring convictions, identity, and mission in context-specific ways (Korthagen). This framework might address Iranian barriers—

top-down curricula, heavy workloads, and limited autonomy—more effectively than traditional approaches (Farahian & Rajabi, 2022; Tabassi et al., 2020), aligning with prior findings on collaborative reflection's role in agency and well-being (Ahmadi & Yousofi, 2024; Ghamoushi, 2025; Namaziandost et al., 2023).

Implications include embedding DRJ and GCCR in Iranian teacher training program to cultivate resilient, critical educators who shift from rote instruction to student-centered practices. Theoretically, the enriched Onion Model—incorporating non-Western ethical and relational elements—offers a cross-cultural tool for EFL development. Practically, policymakers should prioritize mentor programs and workshops on reflective practice, potentially via TESOL partnerships, to reduce burnout and elevate EFL teaching to a transformative profession (Day et al., 2006; Zeichner & Liston, 2013).

Limitations included the modest sample ($n = 60$) from private language institutes in Tehran, limiting generalizability, and the semester-long duration, which may not capture sustained effects. Future longitudinal or cross-cultural studies could validate the extended model and explore scalability. Overall, this study tried to position DRJ as a transformative tool, bridging global reflective practices with Iranian realities to foster equity, innovation, and professional growth.

CONCLUSION AND IMPLICATIONS

This study provided evidence that dialogic reflective journals (DRJ), integrated with guided collaborative critical reflection (GCCR), can enhance critical thinking skills and professional identity development among Iranian EFL teachers. By combining Schön's (1983) Reflective Practice Model with Korthagen's (2004) Onion Model as theoretical framework, the mixed methods design revealed significant quantitative gains in the experimental group and identified four emergent themes—Ethical Mission Alignment, Collaborative Agency, Emotional Resilience, and Socio-Cultural Awareness—that extended Korthagen's framework with relational,

emotional, and sociopolitical dimensions relevant to the Iranian context. These findings suggested that structured, mentor-guided reflective practices might support transformative learning (Mezirow, 1998) and help mitigate common barriers such as workload pressures and limited autonomy. The extended Onion Model offers a potentially useful tool for understanding teacher development in similar constrained settings. Practically, the results support the incorporation of DRJ and GCCR into pre-service and in-service EFL teacher education programs in Iran. Given the study's focus on private language institutes in Tehran and its semester-long duration, the findings are context-specific, and longitudinal as well as cross-cultural research would be valuable to assess longer-term effects and broader applicability.

Disclosure statement

No potential conflict of interest was reported by the authors.

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