

ENHANCING DOCTORAL STUDENTS' DEEP LEARNING THROUGH STRUCTURED REFLECTIVE PRACTICE: A CLASSROOM INQUIRY STUDY

กมลมาลย์ ไชยศิริธัญญา¹ และชวนชุม ชินะตั้งกุร²

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Abstract

This study aimed (1) To examine the characteristics and processes of reflective practice among doctoral students; (2) to analyze the effects of reflection on students' deep learning; and (3) to synthesize effective practices for using reflection as a pedagogical tool in graduate education.

The study employed a qualitative classroom inquiry research design situated within a doctoral leadership course. The participants consisted of 30 doctoral students enrolled in leadership and educational administration programs. Data were collected through multiple qualitative sources, including structured reflective journals, peer reflection records, classroom observation notes, learning artifacts, and the instructor's teaching reflections. Data collection was conducted throughout the instructional period to capture the developmental nature of students' reflective learning. The data were analyzed using thematic analysis, with iterative coding and constant comparison to identify patterns related to reflective processes, learning depth, and pedagogical design.

The findings revealed three key themes: (1) Doctoral students demonstrated varying levels of reflective engagement, progressing from descriptive reflection toward analytical and critical reflection when guided by structured prompts and supportive facilitation; (2) reflective practice contributed significantly to deep learning by enabling students to integrate theory with professional experience, question underlying assumptions, and construct new meaning relevant to leadership practice; and (3) effective reflective learning was strongly influenced by intentional instructional design, including clear reflective frameworks, formative feedback, and a psychologically safe learning environment.

Keywords: doctoral students, deep learning, structured reflective practice

Introduction

Doctoral education plays a critical role in preparing educational leaders who are capable of navigating complexity, uncertainty, and rapid change within contemporary education systems. Unlike undergraduate or master's-level learning, doctoral study requires learners to engage in advanced forms of thinking that integrate theoretical knowledge, professional practice, ethical judgment, and scholarly inquiry (Gardner, 2009; Lee & Danby, 2012). In professional doctoral programs in educational administration, learning is expected not only to deepen disciplinary expertise but also to transform practitioners' ways of thinking, decision-making, and leadership practice (Costley & Lester, 2012).

Educational leadership, as a field of study and practice, has increasingly emphasized reflective capacity as a core professional competency. Leaders are required to critically examine their assumptions, interpret complex organizational contexts, and make ethically grounded decisions in real-world situations (Bush, 2020; Fullan, 2014). Consequently, doctoral programs in educational leadership must move beyond content transmission toward pedagogical approaches that foster deep learning, critical reflection, and theory-practice integration (Shulman, 2005). However, designing learning environments that effectively support these outcomes remains a persistent challenge, particularly in classrooms where learners bring diverse professional backgrounds, cultural experiences, and levels of academic preparedness.

Reflective practice has long been recognized as a powerful mechanism for professional learning. Originating from Dewey's (1933) conception of reflective thinking as active, persistent, and careful consideration of experience, reflective practice was later conceptualized by Schön (1983) as a process through which professionals learn from action and improve practice in complex, uncertain situations. In higher education, reflective activities—such as reflective journals, guided reflection prompts, and peer reflection—have been shown to promote deeper understanding, metacognitive awareness, and professional identity development (Boud, Keogh, & Walker, 1985; Moon, 2004).

In doctoral education, reflection serves a particularly significant role. Doctoral learners are often experienced professionals who must reconcile existing practice-based knowledge with abstract theoretical frameworks and research-oriented ways of thinking (Lee, 2009). Structured reflective practice can support this transition by enabling learners to articulate tacit knowledge, interrogate professional assumptions, and connect theory with

practice in a systematic manner (Brookfield, 2017). Moreover, reflection in doctoral classrooms can function as a social and dialogic process, fostering collaborative learning through peer feedback and shared meaning-making (Vygotsky, 1978).

Despite its recognized importance, reflective practice in doctoral-level teaching is frequently implemented in an implicit or unstructured manner, leaving its pedagogical value underexamined and its learning outcomes insufficiently documented (Ashwin, 2015). In professional doctoral programs, reflective activities are often treated as supplementary tasks rather than as core mechanisms for learning and assessment. As a result, instructors may struggle to articulate how reflective practice contributes to deep learning, leadership development, and ethical academic engagement, particularly in contexts involving digital technologies and artificial intelligence.

Within the framework of the Scholarship of Teaching and Learning (SoTL), instructors are encouraged to systematically investigate their own teaching practices using evidence from the classroom, with the aim of improving learning and contributing to the broader knowledge base of higher education pedagogy (Boyer, 1990; Felten, 2013). Classroom inquiry grounded in reflective practice aligns closely with this perspective, as it positions teaching as a scholarly activity informed by data, analysis, and critical reflection. For instructors in doctoral programs, adopting a SoTL-oriented approach offers a pathway to transform everyday teaching challenges into opportunities for pedagogical insight and academic leadership.

This study is situated within this scholarly teaching paradigm and examines reflective practice as a pedagogical strategy in doctoral-level courses in educational leadership. Drawing on classroom-based qualitative inquiry, the study explores how structured reflective activities support doctoral students' deep learning, academic communication, and ethical engagement with digital tools, while simultaneously informing the instructor's ongoing development as a scholarly teacher. By foregrounding classroom evidence and reflective analysis, this study seeks to contribute to the growing body of literature on doctoral pedagogy, educational leadership development, and reflective practice in higher education.

Research Questions

1. How do doctoral students engage in reflection on their own learning processes?

2. How does reflective practice influence doctoral students' deep learning?
3. What reflective design practices support and enhance learning at the doctoral level?

Research Objectives

1. To examine the characteristics and processes of reflective practice in doctoral students' learning.
2. To analyze the effects of reflective practice on students' deep learning.
3. To synthesize effective practices for using reflection as a pedagogical tool to enhance learning in graduate education.

Literature Review

Doctoral Learning and Leadership Development in Professional Contexts

Doctoral education in educational leadership differs fundamentally from traditional academic doctoral programs, as it emphasizes the development of practitioner-scholars who are capable of integrating theory, research, and leadership practice in complex organizational contexts (Costley & Lester, 2012; Lee, 2009). Professional doctoral learners are typically experienced educators or administrators whose learning needs extend beyond knowledge acquisition toward critical judgment, ethical decision-making, and system-level thinking (Gardner, 2009).

Scholars have argued that effective doctoral pedagogy must support transformative learning rather than incremental skill development (Mezirow, 2000). In leadership education, this transformation involves challenging deeply held assumptions, reframing professional identities, and developing the capacity to lead change under conditions of uncertainty (Bush, 2020; Fullan, 2014). Consequently, learning activities in doctoral leadership programs must create opportunities for learners to interrogate real-world dilemmas, reflect on professional experience, and connect abstract theories to lived practice.

However, research has consistently shown a tension between academic expectations and professional orientations in doctoral classrooms (Lee & Danby, 2012). Doctoral learners may struggle to translate experiential knowledge into scholarly discourse or to engage deeply with theory when teaching approaches rely heavily on lectures or content coverage (Ashwin, 2015). This challenge highlights the need for pedagogical

strategies that explicitly scaffold doctoral students' thinking processes and support their transition toward scholarly leadership.

Reflective Practice as a Mechanism for Deep Learning and Leadership Thinking

Reflective practice has been widely recognized as a cornerstone of professional learning and leadership development. Dewey (1933) conceptualized reflection as a disciplined form of thinking that transforms experience into learning through inquiry and reasoning. Schön (1983) further extended this notion by emphasizing reflection-in-action and reflection-on-action as mechanisms through which professionals navigate complex and uncertain situations.

In higher education, reflective activities have been shown to promote deep learning by encouraging learners to examine assumptions, integrate new knowledge with prior experience, and develop metacognitive awareness (Moon, 2004; Brookfield, 2017). For doctoral learners, reflection plays a critical role in bridging the gap between practice-based knowledge and theoretical frameworks (Lee, 2009). Structured reflective practices—such as guided reflection prompts, reflective journals, and facilitated dialogue—can help learners articulate tacit knowledge and reposition themselves as scholarly practitioners (Boud et al., 1985).

Within leadership education, reflective practice supports the development of ethical reasoning, self-awareness, and adaptive decision-making (Bush, 2020). Reflection enables leaders to examine the moral dimensions of their actions and to consider the broader consequences of leadership decisions within educational systems (Fullan, 2014). Importantly, reflective learning is most effective when it is socially mediated through dialogue and feedback, allowing learners to co-construct meaning and challenge one another's perspectives (Vygotsky, 1978).

Despite these benefits, studies suggest that reflective practice in doctoral classrooms is often under-theorized and insufficiently evidenced (Ashwin, 2015). Reflection is frequently treated as a personal or informal activity, rather than as a core pedagogical strategy aligned with learning outcomes and assessment criteria. This gap underscores the importance of examining how reflective practice can be systematically designed, implemented, and evaluated in doctoral-level teaching.

Reflective Practice within the Scholarship of Teaching and Learning (SoTL) The Scholarship of Teaching and Learning (SoTL) provides a conceptual framework for

understanding teaching as a form of scholarly inquiry grounded in evidence from practice (Boyer, 1990; Felten, 2013). Within this framework, instructors are encouraged to pose questions about student learning, collect and analyze data from their classrooms, and share findings to inform both practice and theory.

Reflective practice aligns closely with SoTL principles, as it positions teaching as an iterative process of inquiry, analysis, and improvement (Shulman, 2005). Classroom-based reflection enables instructors to examine the impact of pedagogical decisions on student learning and to adapt strategies based on evidence rather than intuition alone (Trigwell et al., 2000). In doctoral education, such inquiry-oriented teaching is particularly valuable, as it models scholarly habits of mind for students and reinforces the integration of teaching, research, and leadership.

Recent studies in SoTL emphasize the importance of making reflective processes explicit and assessable, particularly in advanced learning contexts (Felten, 2013). When reflective practice is embedded within assessment structures—such as reflective commentaries linked to rubrics or peer feedback—it becomes a visible and accountable component of learning. This approach not only enhances student engagement but also generates credible evidence of learning outcomes for quality assurance and professional standards frameworks.

However, there remains a need for empirical studies that document how reflective practice functions as a pedagogical strategy in doctoral leadership classrooms, particularly in relation to ethical leadership and the responsible use of digital technologies. Addressing this gap, classroom-based research grounded in SoTL can contribute practical insights into how reflection supports deep learning while simultaneously advancing instructors' development as scholarly teachers.

Research Design and Methodology

Research Design: This study adopted a qualitative research design grounded in **Classroom Inquiry** and the **Scholarship of Teaching and Learning (SoTL)** framework. The design positions teaching practice as a site of systematic inquiry, where evidence from authentic classroom contexts is used to examine, analyze, and improve student learning. Reflection was conceptualized not merely as a learning activity, but as a pedagogical and analytical lens through which doctoral-level learning processes and outcomes could be examined.

A **practice-based and interpretive approach** was employed to capture the complexity of doctoral students' reflective processes and their influence on deep learning. This design aligns with the objectives of the study, which seeks to understand *how* doctoral students engage in reflection, *how* reflection shapes deep learning, and *what* design practices support reflective learning at the graduate level.

Research Context and Participants

The study was conducted in a doctoral-level course in educational leadership offered within a Doctor of Philosophy Program in Leadership in Educational Administration at Bangkokthonburi University. The course emphasized leadership theory, reflective practice, and applied learning through seminars, collaborative activities, and problem-based discussions.

Participants consisted of 30 doctoral students enrolled in the course during semester one in 2024 academic year. The participants represented diverse professional backgrounds, including school administrators, teachers, and educational practitioners, all of whom brought substantial professional experience into the learning environment. Participation in the study was voluntary, and ethical considerations related to confidentiality, informed consent, and respectful use of student learning data were strictly observed.

Pedagogical Design of Reflective Practice

Reflective practice was intentionally embedded throughout the course design as a core learning mechanism. Reflection was structured at multiple points in the learning process, including:

- **Pre-reflection**, where students articulated prior experiences, assumptions, and expectations related to leadership and learning;
- **Reflection-in-action**, where students engaged in reflective dialogue during seminars, group discussions, and leadership simulations; and
- **Post-reflection**, where students produced written reflective narratives connecting theory, experience, and emerging insights.

Reflective prompts were designed to encourage higher-order thinking, critical analysis, and theory-practice integration rather than descriptive recounting. The design

emphasized reflective depth, ethical awareness, and professional meaning-making, consistent with doctoral-level learning expectations.

Data Sources

Multiple qualitative data sources were collected to support triangulation and enhance the trustworthiness of the findings. These included:

1. **Reflective Writing Artifacts**, such as structured reflective journals, learning reflections, and synthesis papers produced throughout the course;
2. **Student Learning Artifacts**, including presentations, leadership analyses, and project-based assignments that demonstrated theory-informed application;
3. **Classroom Interaction Data**, drawn from observation notes, reflective discussions, and peer feedback exchanges during learning activities; and
4. **Instructor Reflective Memos**, documenting pedagogical decisions, classroom dynamics, and emerging patterns related to student reflection and learning.

These data sources collectively captured both students' reflective processes and the learning outcomes associated with reflective engagement.

Data Analysis

Data were analyzed using **thematic analysis**, following an iterative and inductive process. Initial coding focused on identifying patterns in how doctoral students engaged in reflection, including the depth, focus, and orientation of their reflective thinking. Subsequent rounds of analysis examined relationships between reflective practices and indicators of deep learning, such as conceptual integration, critical perspective-taking, and application to professional contexts.

Themes were refined through constant comparison across data sources, allowing for the synthesis of reflective design practices that appeared to support doctoral-level learning most effectively. Throughout the analysis, attention was given to maintaining analytic rigor through transparency, reflexivity, and systematic documentation of analytic decisions.

Findings

The findings are organized in alignment with the three research objectives. Analysis of reflective artifacts, learning outputs, classroom interactions, and instructor reflective

memos revealed three interrelated thematic findings that illuminate the nature of doctoral students' reflective processes, the influence of reflection on deep learning, and effective design principles for reflective practice at the graduate level.

1. Characteristics and Processes of Doctoral Students' Reflection The findings indicate that doctoral students' reflective processes evolved from **descriptive reflection** toward **analytical and integrative reflection** over the course of the semester. In the early stages, reflections primarily focused on recounting experiences, summarizing course content, or expressing personal reactions to learning activities. These reflections were often experience-based but lacked explicit engagement with theoretical frameworks or critical examination of underlying assumptions.

As reflective activities were repeatedly structured and scaffolded, students increasingly demonstrated deeper forms of reflection characterized by three key features. First, reflections became more **theory-informed**, with students explicitly linking leadership theories to personal professional experiences and classroom scenarios. Second, reflections showed **critical awareness**, as students questioned prior beliefs, examined tensions between theory and practice, and recognized limitations in their own leadership approaches. Third, reflections exhibited **forward-looking orientation**, where students articulated implications for future professional practice and leadership decision-making.

This progression suggests that doctoral-level reflection is not a fixed capacity but a developmental process that requires intentional pedagogical design and sustained engagement.

2. Influence of Reflective Practice on Deep Learning The analysis revealed that reflective practice functioned as a central mechanism for promoting **deep learning** among doctoral students. Reflection enabled learners to move beyond surface understanding of leadership concepts toward meaningful integration of knowledge, experience, and professional identity.

Evidence of deep learning emerged in three primary forms. First, students demonstrated **conceptual integration**, where leadership theories were no longer treated as abstract knowledge but as analytical tools for interpreting real-world organizational challenges. Second, reflection supported **transformative learning**, as students reported shifts in how they understood their roles as educational leaders, particularly in relation to ethical decision-making, responsibility, and collaboration. Third, reflective engagement

fostered **application and transfer**, with students explicitly describing how insights gained through reflection informed actions in their own educational contexts.

Notably, deep learning was most evident when reflection was connected to authentic leadership dilemmas and followed by guided dialogue or feedback, rather than when reflection was conducted as an isolated individual task.

3. Synthesized Practices for Designing Reflection in Graduate-Level Learning

The findings also point to a set of design principles that enhance the effectiveness of reflective practice in doctoral education. First, **structured reflective prompts** that explicitly require connections between theory, experience, and professional practice were more effective than open-ended reflection alone. Second, **iterative reflection cycles**, which incorporated pre-reflection, reflection-in-action, and post-reflection, supported progressive depth of learning over time. Third, the integration of **dialogic reflection**, such as peer feedback and guided discussion, enriched individual reflection by exposing students to alternative perspectives and collective meaning-making.

Additionally, the instructor's role as a reflective facilitator—providing feedback, modeling reflective thinking, and creating a psychologically safe learning environment—was found to be critical in sustaining reflective engagement. Reflection was most impactful when positioned not as an evaluative requirement, but as a shared scholarly practice aligned with doctoral-level inquiry and leadership development.

Discussion

This study set out to examine doctoral students' reflective processes, the influence of reflection on deep learning, and effective practices for designing reflection in graduate education. The discussion below interprets the findings in relation to each research objective, integrating the researcher's scholarly perspective with relevant theoretical and empirical literature.

1. Reflective Characteristics and Processes of Doctoral Students' Learning The findings indicate that doctoral students' reflective processes developed progressively from descriptive accounts toward analytical and integrative reflection. Early reflections tended to focus on recounting experiences and summarizing content, while later reflections demonstrated theory-informed analysis, critical examination of assumptions, and forward-looking professional application.

From the researcher's perspective, this progression underscores that reflective capacity at the doctoral level should not be assumed as an existing competence but understood as a **developmental process** that requires intentional scaffolding. Although doctoral students possess substantial professional experience, the ability to engage in critical reflection that integrates theory, practice, and professional identity emerges through structured opportunities and sustained engagement rather than through experience alone.

This finding aligns with foundational theories of reflective learning. Dewey (1933) conceptualized reflection as an active, deliberate process of meaning-making rather than spontaneous introspection. Similarly, Schön's (1983) distinction between reflection-on-action and reflection-in-action helps explain how students gradually moved from retrospective descriptions toward more analytical and anticipatory forms of reflection. Empirical studies in graduate education also suggest that structured reflection prompts are essential for advancing learners beyond surface-level reflection (Ryan, 2013; Hatton & Smith, 1995). Thus, the findings reinforce the view that reflective sophistication at the doctoral level is pedagogically cultivated rather than naturally occurring.

2. Effects of Reflective Practice on Deep Learning The findings further reveal that reflective practice played a pivotal role in fostering deep learning among doctoral students. Reflection enabled learners to integrate leadership theory with professional experience, reframe their understanding of leadership roles, and apply conceptual insights to real-world organizational contexts. Evidence of deep learning was particularly apparent when reflection was embedded within authentic leadership dilemmas and supported by dialogue and feedback.

The researcher interprets these findings as confirmation that reflection functions as a **mediating mechanism** between experience and conceptual understanding. Rather than serving as a supplementary activity, reflection became the core process through which learners transformed experience into knowledge. This suggests that deep learning in doctoral education is less about content complexity and more about the quality of cognitive and metacognitive engagement facilitated through reflection.

This interpretation is strongly supported by deep learning theory and transformational learning literature. Biggs and Tang (2011) emphasize that deep learning occurs when learners actively relate ideas, evaluate evidence, and construct meaning. Mezirow's (1991) theory of transformative learning further explains how critical reflection

on assumptions can lead to shifts in perspective, identity, and professional practice. In leadership education, reflective engagement has been shown to support ethical reasoning, sense-making, and adaptive decision-making (Day, Fleenor, Atwater, Sturm, & McKee, 2014). The present findings extend this body of work by demonstrating how structured reflection in doctoral classrooms can systematically support deep and transformative learning.

3. Effective Practices for Designing Reflective Learning at the Graduate Level

The third objective sought to synthesize effective practices for designing reflection as a pedagogical tool in graduate education. The findings highlight the importance of structured prompts, iterative reflection cycles, dialogic reflection, and the instructor's role as a reflective facilitator. Reflection was most effective when framed as a scholarly practice embedded within learning design, rather than as an isolated or purely evaluative task.

From the researcher's standpoint, these findings emphasize that reflective learning is fundamentally **design-dependent**. Simply asking students to "reflect" is insufficient; reflective depth emerges when reflection is intentionally aligned with learning outcomes, assessment criteria, and opportunities for feedback. The instructor's role is therefore not peripheral but central in modeling reflective thinking, sustaining psychological safety, and positioning reflection as a legitimate academic practice.

These conclusions are consistent with Scholarship of Teaching and Learning (SoTL) literature, which emphasizes the systematic use of evidence from teaching practice to inform pedagogical design (Boyer, 1990; Hutchings, Huber, & Ciccone, 2011). Research on reflective pedagogy also supports the use of iterative and dialogic reflection to deepen learning (Brookfield, 2017; Ash & Clayton, 2009). Within the context of professional and leadership education, reflective design has been linked to enhanced ethical awareness, professional judgment, and adaptive leadership capacity (Raelin, 2002). Accordingly, the findings contribute to SoTL by articulating transferable design principles for reflective practice in doctoral education.

Implications for Teaching and Leadership

The findings of this study offer important implications for both teaching practice in doctoral education and the development of leadership capacity among advanced learners. By positioning reflection as a core pedagogical and leadership development mechanism,

the study contributes practical insights for instructors, academic leaders, and institutions seeking to enhance deep learning and professional formation at the graduate level.

Implications for Teaching in Doctoral Education

First, the study underscores that reflective practice should be intentionally designed as an integral component of doctoral teaching rather than treated as an ancillary or purely evaluative activity. Reflection functions most effectively when it is systematically aligned with learning outcomes, disciplinary knowledge, and assessment criteria. For instructors, this implies the need to move beyond generic reflective prompts toward **structured, theory-informed reflection tasks** that require students to articulate reasoning, interrogate assumptions, and connect experience with scholarly frameworks.

Second, the findings highlight the importance of the instructor's role as a **reflective facilitator**. Effective reflective learning does not emerge automatically from student experience; rather, it depends on the instructor's capacity to model reflective thinking, pose probing questions, and create psychologically safe learning environments. In doctoral classrooms, where learners bring diverse professional identities and experiences, instructors must balance academic rigor with empathy, dialogic engagement, and ethical sensitivity. This reinforces the view that high-quality doctoral teaching involves pedagogical leadership rather than technical delivery of content.

Third, the study suggests that reflective practice can serve as a form of **evidence-informed teaching** within the Scholarship of Teaching and Learning (SoTL). By systematically collecting and analyzing reflective data from students, instructors can use classroom evidence to refine learning design, assessment strategies, and instructional decision-making. Such practices not only enhance student learning but also enable instructors to articulate and disseminate pedagogical knowledge grounded in authentic teaching contexts.

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