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Fostering Epistemic Expertise and Research Rigor among EFL Doctoral Students in English Studies: A Follow-Up Study Using a Self-Efficacy Lens

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ABSTRACT

This follow-up study examines whether participation in the Research-Publication (Res-Pub) Training Workshop influenced the epistemic expertise and research rigor of 20 doctoral students in English Studies. The workshop was designed using a reframed Community of Practice (CoP) approach situated within the Disciplinary Writing Expertise (DWE) framework. To enhance research publishability, this study introduces the Scholarly Rigor-Expertise (SR-E) model, integrating eight methodological components—(1) Critical Literature Navigation, (2) Domain-Specific Knowledge, (3) Epistemological Awareness, (4) Conceptual Framework Development, (5) Methodological Justification, (6) Transparent Data Collection Design, (7) Analytical Rigor and Interpretation, and (8) Reflective and Contextual Conclusions. A mixed-methods design integrated a self-constructed self-efficacy survey with qualitative data from focus groups and in-depth interviews. Findings showed strong self-efficacy in six areas (means = 3.26 -3.42) and moderate self-efficacy in Conceptual Framework Development, and Reflective and Contextual Conclusions (means = 3.20, 3.14). Qualitative data enrich the quantitative findings, offering deeper insights into the SR-E model's effectiveness. Focus groups interviews emphasized

Domain-Specific Knowledge, while in-depth interviews deepened Methodological Justification–both central to research expertise. The findings suggest the Res-Pub Training Workshop, grounded in the Reframed CoP model, could enhance the participants' scholarly rigor and expertise, fostering research and practice to support doctoral students and young scholars' development.

Keywords: Scholarly Rigor-Expertise (SR-E) Model, Disciplinary Writing Expertise (DWE) Framework, EFL doctoral students, self-efficacy

Introduction

Publishing in highly-ranked journals is challenging for EFL doctoral students in non-English settings. These students often face several challenges, two of which include the exploration of the complexities of disciplinary research, and mastering the rhetorical conventions and linguistic features appropriate for their research knowledge (Flowerdew, 2001; Li, 2022). In this study, I consequently introduce an initiative that emphasizes epistemic expertise and research rigor to support EFL doctoral students in conducting high-quality research, thus enhancing their publishability of their work.

For doctoral students, epistemic expertise, disciplinary knowledge, and research rigor are essential for their successful graduation (Flaster et al., 2020; Gube et al., 2017). Their awareness of disciplinary knowledge, socialization within research disciplines, and collaboration with advisors help them construct academic identities, overcome intellectual barriers, and improve chances of publishing successfully (Gube et al., 2017). I, however, argue that methodological integrity is more crucial for them to foster their research quality and publishability. As a guiding principle, it establishes solid foundations for research rigor, and ensures that research findings are trustworthy, reproducible, and ethically sound, which consequently enhances the credibility of their work within the academic community.

Building on my previous study, where I trained research assistants in the sciences for scholarly publication (Thongrin, 2018), in this study, I further examine epistemic expertise and methodological integrity in the context of EFL doctoral students in English Studies, whose research is situated within the social sciences and humanities. The longitudinal study used a Disciplinary Writing Expertise (DWE) framework in the Research-Publication (Res-Pub) Training Workshop for 20 doctoral students at a leading Thai university. The DWE framework integrates three models: (1) a Reframed Community of Practice (CoP) approach, wherein I translated six elements from Lave and

Wenger (1991) and Wenger (1998), (see Thongrin, in press); (2) the Scholarly Rigor-Expertise (SR-E) model, which combines epistemic expertise and research rigor for high-quality research; and (3) the Scholarly Publication-Expertise (SP-E) model for research publishability. The Reframed CoP model guided instruction, while SR-E and SP-E were core training components. In particular, this follow-up study explores the SR-E model as a foundation for methodological integrity, aiming to enhance research quality and increase doctoral students' chances for publication.

Methodological integrity is defined as the research rigor that ensures the entire research process and its outputs meet high standards. This follow-up study explores doctoral students' self-efficacy in developing methodological integrity, which is crucial for academic publication. It examines eight key elements: (1) Critical Literature Navigation, (2) Domain-Specific Knowledge, (3) Epistemological Awareness, (4) Conceptual Framework Development, (5) Methodological Justification, (6) Transparent Data Collection Design, (7) Analytical Rigor and Interpretation, and (8) Reflective and Contextual Conclusions. The study is guided by the following research question:

> How did EFL doctoral graduates perceive their self-efficacy in developing epistemic expertise and research quality for publication after participating in the Research-Publication Training Workshop underpinned by the Reframed Community of Practice model within the Disciplinary Writing Expertise framework?

The findings could shed light on future training programs designed to foster doctoral students and young scholars to achieve scholarly rigor and expertise, which is fundamental to scholarly publication.

Literature Review

Epistemic Expertise and Disciplinary Knowledge in Doctoral Education

Epistemic expertise and disciplinary knowledge are fundamental to doctoral education, shaping high-quality research and academic excellence. Epistemic expertise involves producing, evaluating, and applying knowledge within a discipline (Bereiter & Scardamalia, 1993; Goldman, 1999), while disciplinary knowledge refers to the theories and methodologies defining specific fields (Becher & Trowler, 2001). Both are interconnected—disciplinary knowledge provides researchers with the foundation for epistemic expertise, which enhances their critical evaluation and interdisciplinary insights.

In doctoral education, epistemic expertise enables students to assess existing research and apply relevant methodologies, which fosters a deeper, and more impactful inquiry (Chiang, 2020). However, EFL doctoral students

often face language barriers that hinder their ability to justify theoretical and methodological choices, affecting research quality.

Similarly, disciplinary knowledge equips students with specialized concepts and academic language, allowing them to position their research within scholarly conversations and address pressing questions (Hyland, 2012). Grounded in core frameworks, they can formulate meaningful research topics and conduct well-structured studies (Golde & Walker, 2006). The interplay between epistemic expertise and disciplinary knowledge helps students balance theoretical frameworks with empirical findings while addressing emerging research challenges (Walker et al., 2007). Yet, without a strong disciplinary foundation, students may struggle to engage in global academic discourse and produce high-quality research (Hyland, 2012).

Research Quality and Research Rigor in Doctoral Education and Publishing

Research quality reflects the overall value of research, including originality, relevance, clarity, and academic contribution (Erwee & Perry, 2018; Kyvik & Thune, 2015). High-quality research provides intellectual depth and insights that shape future studies, policies, and practices. However, achieving quality requires balancing depth with breadth, ensuring both novelty and applicability.

Research rigor, on the other hand, refers to the systematic approach of conducting research, ensuring methodological soundness, validity, and reliability (Donnelly et al., 2018). While rigor is often associated with quantitative research, it is equally essential in qualitative studies, enhancing trustworthiness, credibility, and transferability (Lincoln & Guba, 1985). Quality and rigor are interconnected—rigor ensures replicability and credibility, while quality ensures meaningful contributions. Striking a balance between both is then critical to producing impactful research.

Doctoral programs emphasize knowledge creation, originality, and contribution to academic fields (Clarke & Lunt, 2014; Kiley, 2009). Research quality and rigor are fundamental to PhD dissertations, particularly in international programs across the UK, the US, Europe, and Asia, where social sciences and humanities students are expected to meet high publication standards (Adunyarittigun et al., 2023; Golding et al., 2013; Holmes et al., 2020). Dissertations are evaluated based on originality, critical insight, and contribution to knowledge (Winter et al., 2000), with an increasing emphasis on publication success (Erwee & Perry, 2018). In the social sciences, particularly in Western contexts, research contribution is often defined by its ability to integrate and advance knowledge with the goal of eventual publication (Kyvik & Thune, 2015).

Research rigor is recognized as a benchmark of high-quality research that ensures methodological soundness, reliability, and validity. This is witnessed by the doctoral students in the arts, humanities, and social sciences of Durham University who are expected to demonstrate abilities in criticality, systematic analysis, and evidence-based argumentation (Holmes et al., 2020), all of which are reflected by development in epistemic expertise and research competencies required for publication.

However, non-native doctoral students frequently struggle to achieve research rigor due to limited resources and language barriers (Paltridge & Starfield, 2016). This highlights the need for workshops on research design, data analysis, and ethics, supported by constructive feedback (Lee & Kamler, 2008), to strengthen their research and publication skills. However, clear guidelines for achieving these standards remain lacking in doctoral training (Erwee & Perry, 2018). Many doctoral students are unaware of the expectations for research outputs required for publication, and this further hinders their success in academic publishing.

To address these gaps, I developed the SR-E model, which contains eight elements related to epistemic expertise and research rigor. This model was implemented in a workshop designed to enhance doctoral students' self-efficacy in producing high-quality research outcomes. As outlined in Table 1, these eight elements are derived from the literature, primarily drawn from Creswell and Creswell (2018) and Tracy (2010), and applied in this study.

Table 1

Eight Elements of the Scholarly Rigor and Expertise (SR-E) Model

Item No.	Elements of Research Quality	Description & Function in Research Processes	Rationale
1.	Critical Literature Navigation	- explores and integrates relevant literature to indicate research gaps, and informs research design, theory, and methodology. -serves as Research Goals conceptualized from literature review.	-synthesizes research existing in the fields as a framework or foundation that leads to research contribution (Creswell & Creswell, 2018). -develops critical, analytical skills, and academic argumentation that are necessary for conducting research (Boote & Beile, 2005).

2.	Domain-Specific Knowledge	-incorporates specific knowledge from the research field or discipline to help articulate research questions, methodology, and data analysis. -serves as Research Goals conceptualized from specific research in the disciplinary field.	-helps students align their research with the values, methodologies, and discourse of their discipline (Hyland, 2012). -enhances research alignment with disciplinary standards (Tracy, 2010).
3.	Epistemological Awareness	- fosters awareness of the philosophical assumptions underpinning research processes, and frames how knowledge is constructed. - serves as Research Goals conceptualized from research paradigms.	- fosters a deeper understanding of how knowledge is constructed and how this impacts research design, interpretation (Creswell & Creswell, 2018), and research validity (Tracy, 2010).
4.	Conceptual Framework Development	- develops a clear conceptual framework. - serves as the Roadmap of Research Methods.	- provides a roadmap connecting theory to practice (Creswell & Creswell, 2018). - develops skills in framing a study's scope and theoretical grounding, essential for coherence and scholarly impact (Maxwell, 2013).
5.	Methodological Justification	- justifies choices of research methods which align with research objectives, research questions, and philosophical assumptions. - serves as Research Methods.	- offers rationale for method choices conforming to research goals (Creswell & Creswell, 2018). - develops the ability to critically select and justify methods, essential for both qualitative and quantitative research (Patton, 2015).
6.	Transparent Data Collection Design	- implements clear and transparent data collection methods, which creates reliability and replicability.	- builds competence in designing data collection tools and protocols that give reliable and valid results (Cohen et al., 2018).

		- serves as Research Methods.	- allows replicability and reliability through clear data-gathering methods (Tracy, 2010).
7.	Analytical Rigor and Interpretation	- maintains analytical rigor through systematic analysis and thoughtful data interpretation. - serves as Data Analysis.	- strengthens critical thinking and analytical skills, enabling students to evaluate findings rigorously (Miles et al., 2014). - strengthens a thorough, systematic analysis for credible interpretations (Braun & Clarke, 2006).
8.	Reflective and Contextual Conclusions	- draws conclusions that are reflective of the data and context, which lends insights relevant and meaningful within the research framework. - serves as Data Analysis.	- draws meaningful, contextually relevant insights connecting practice to theory (Tracy, 2010). - articulates the implications and limitations of their studies (Creswell & Creswell (2018).

These eight elements conform to established rigor and methodological integrity. The model starts with Critical Literature Navigation, central to high-quality research, helping researchers understand disciplinary knowledge (Boote & Beile, 2005), build theoretical frameworks (Maxwell, 2013), and identify gaps (Hart, 1998). It enhances critical, analytical skills, and academic argumentation essential for doctoral students (Creswell & Creswell, 2018). Domain-Specific Knowledge, the second element, helps students situate their research within disciplinary values, methodologies, and discourse central to producing high-quality work (Hyland, 2012; Tracy, 2010). This knowledge, along with Epistemological Awareness, the third element, helps researchers understand research ontology (Crotty, 1998; Guba & Lincoln, 1994), paradigms, and their impact on methodology and data analysis (Creswell & Creswell, 2018). This is particularly challenging in disciplines with Constructivist or Interpretivist perspectives.

The fourth element, Conceptual Framework Development, connects methodology to actual research activities, ensuring coherence and research impact (Maxwell, 2013). Methodological Justification, the fifth element, requires researchers to critically justify their research methods, reflecting research validity and publishability (Creswell & Creswell, 2018; Patton, 2015).

With the sixth element, Transparent Data Collection Design, researchers can implement clear and robust data collection methods that help enhance the reliability and validity of their research findings (Cohen et al., 2018). The

seventh element, Analytical Rigor and Interpretation, equips researchers with the ability to critically and systematically assess their findings (Miles et al., 2014). This conforms to systematic thematic analysis in qualitative research (Braun & Clarke, 2006). Finally, the eighth element, Reflective and Contextual Conclusions, allows researchers to derive meaningful, contextually relevant insights, bridge theory and practice, and gain both the implications and limitations of their study (Creswell & Creswell, 2018; Tracy, 2010).

With these elements, the SR-E model encompasses epistemic expertise (Hyland, 2012), methodological rigor (Creswell & Creswell, 2018), and practical relevance (Tracy, 2010). As a result, this structured framework helps doctoral students conduct their research with a clear and systematic approach to refining their research process and producing high-quality outcomes (Clarke & Lunt, 2014; Golding et al., 2013; Lovitts, 2005).

Methodology

Research Context

This study was conducted within a doctoral program in English Studies of a leading university in Thailand. Though not a PhD by publication, the program requires high-quality dissertations and international publications, integrating various perspectives, such as language in society (Searle, 1969), philosophical contexts (Durkheim, 1897), culture (Hall, 1997), meaning-making (Gadamer, 1975), discourse analysis (Gee, 2014), and language technology (Sinclair, 1991). English Studies provides frameworks to explore language, discourse, and communication, linking epistemological, theoretical, and methodological perspectives across social sciences and humanities.

Research Approach and Design

Building on my previous study (Thongrin, 2018), this follow-up study used a mixed-methods approach (Creswell & Creswell, 2018) to examine the sustained impact of the Res-Pub Training Workshop for doctoral students, exploring how the participants' self-efficacy in the eight components of the SR-E model was influenced by the Reframed Community of Practice (CoP) situated within the DWE framework. It incorporated both quantitative data from a self-efficacy survey (Bandura, 1997) and qualitative data from focus group and individual interviews (Patton, 2015).

Research Participants

Through a convenience sampling method, the study included 20 doctoral students (19 females and 1 male) who had participated in the two previous phases. The first data source was a self-efficacy survey conducted when the participants were enrolled in the program. At the time of data collection, two participants were in the final stages of publishing, fifteen were working on their dissertations, and three were exploring potential research topics. Regarding their research disciplines, four students focused on social sciences, five on humanities, and eleven adopted interdisciplinary topics. The second data source consisted of qualitative interviews, conducted with eight participants selected through purposive sampling, where I also allowed them to voluntarily take part in the interviews (seven females and one male). By the time of the follow-up interviews, all participants had graduated and were working as college instructors.

Table 2

Participant Profile for the Interviews

No.	Participant	Participants' Fields of Research	Participants' Research Stage during the Quantitative Self-Efficacy Study	Participants' Position during the Follow-Up Study
1.	P1	Social science	Final stage of publishing	Public university teacher
2.	P2	Interdisciplinary	Final stage of publishing	Private university teacher
3.	P3	Social science	Candidature process	Community college teacher
4.	P4	Interdisciplinary	Candidature process	Public university teacher
5.	P5	Social science	Candidature process	Private university teacher
6.	P6	Interdisciplinary	Candidature process	Public university teacher
7.	P7	Humanity	Topic exploration	Vocational college teacher
8.	P8	Humanity	Topic exploration	Public university teacher

Sources of Data and Research Instruments

The data sources included the participants' self-efficacy in research expertise after workshop participation and qualitative interviews. Two instruments were used. The first was a self-efficacy survey, based on the eight SR-E model elements, which assessed epistemic expertise, research rigor, and publishability. Self-efficacy is appropriate for evaluating the participants' sustained development as it reflects their confidence in research competencies over time (Bandura, 1997); it also predicts motivation and persistence in scholarly rigor (Zimmerman & Bandura, 1994). The survey measured the participants' confidence using a 4-point scale, ranging from "I am confident I could do this" to "I do not believe I could do this." It included demographics, SR-E elements, and open-ended responses. Validated through the Index of Congruence (0.796) and Cronbach's Alpha (0.970), it was reviewed by three ELT research experts and administered post-workshop to reduce attrition.

The second instrument comprised questions of semi-structured interviews conducted in 2022 with the graduates to examine sustained development. Both focus-group and individual interviews provided collective and personal insights (Kvale & Brinkmann, 2015). These qualitative interviews complemented the survey, ensuring methodological triangulation, enhancing credibility, and validating findings (Patton, 2015).

Research Procedure

This longitudinal study contained three phases. Phase 1 (2015–2016) involved a survey (n = 41) identifying challenges in publishing PhD dissertations. In response with the initial findings, I designed and developed the Res-Pub Training Workshop (n = 20) in Phase 2 (2017–2018), where I established the DWE framework, integrating (1) the Reframed CoP model for enhancing engagement, (2) the SR-E model for fostering research skills, and (3) the SP-E model for cultivating sustained scholarly writing skills beyond conventional rhetorical structures defined by genre analysis. Implemented in 2018–2019, the workshop was designed to improve the participants' academic writing in the Literature Review, Introduction, and Method sections of IMRD papers. The sequence I used in the workshop reflected the nature of research exploration. The t-test results revealed significant progress across the sections.

As an Asian featured speaker, I presented these findings at the 2020 international conference (Thongrin, 2020), co-hosted by the New Korean Association of English Language and Literature, the Pan-Korea English

Teachers Association, and the Korean Association of Language Sciences. I incorporated feedback to form Phase 3, conducted in 2022, where I examined the long-term impact of the workshop on the participants' research-publication competencies. To minimize attrition, twenty participants completed a self-efficacy survey following their involvement in Phase 2, and eight graduates voluntarily participated in focus-group discussions and in in-depth interviews. Findings confirmed high self-efficacy in key areas of the Reframed CoP, SR-E, and SP-E models, reinforcing the DWE framework as an effective approach to enhancing research quality and fostering scholarly publication. The present study specifically highlights the role of the SR-E model in supporting participants' research competencies, which seemingly contributed to their success in academic publishing.

Data Analysis

This study used a mixed-methods design, with data analysis involving two types of data. Quantitative data from the self-efficacy survey were analyzed through descriptive statistics. For the qualitative data, the focus-group and individual interviews were analyzed using thematic analysis (Braun & Clarke, 2006). Firstly, I reviewed the interview data and my research log to gain an understanding of the participants' views. I then systematically coded the data. The initial phase involved deductive coding, guided by the theoretical constructs of the SR-E model. I identified main themes that conformed to the SR-E model elements and the participants' experiences during the workshop. I then reviewed and refined these initial themes to ensure their consistency with the theoretical constructs and the data. However, I remained open to emergent themes by identifying inductive codes through open coding. These were then categorized into broader themes and reviewed for relevance and alignment with the overall data. The combination of deductive and inductive approaches lent me a comprehensive overview of the participants' research-publication competencies, where the analysis was related to the SR-E model with their experiences.

To validate my interpretations, I engaged in a peer validation process with a colleague, where we reviewed and discussed the coded data and resolved any conflicts until we reached a consensus. This process enhanced the rigor and trustworthiness of my analysis, and enabled me to accurately capture the participants' self-efficacy in applying the SR-E model to their dissertations and published works (Morse et al., 2002; Shenton, 2004).

Researcher Positionality, Role, and Ethical Considerations

In this study, I took a dual role of researcher and workshop instructor, drawing on my research experience to enhance the participants' competencies in research and publication. However, I was aware that this could cause ethical challenges, particularly concerning potential bias and power dynamics within the workshop setting (Denzin & Lincoln, 2018; Mercer, 2007). I was also aware that the dual role could unintentionally influence the participants' responses, and potentially affect the validity of findings. To enhance my research integrity and mitigate these concerns, I used two measures. First, I maintained reflective notes throughout the workshop by systematically documenting my observations, decisions, and the participants' reactions. This process allowed me to identify potential biases and adjust my approach with ethical research practices (Smith & Deemer, 2000). Second, I ensured that participation in the study was entirely voluntary, with confidentiality and anonymity in reported data. These measures align with the ethical principles outlined in the British Educational Research Association (British Educational Research Association, 2018) guidelines, where I emphasized respect for the participants' autonomy, informed consent, and their right to withdraw without consequence. These measures helped reinforce the credibility of the study, and ensured that the research process remained transparent and ethically sound.

Results

Research Question

> How did EFL doctoral graduates perceive their self-efficacy in developing epistemic expertise and research quality for publication after participating in the Research-Publication Training Workshop underpinned by the Reframed Community of Practice model within the Disciplinary Writing Expertise framework?

The research question seeks to explore the extent to which the participants' self-efficacy in research competencies was influenced by the workshop, during which they were guided by the teacher as part of the pedagogical intervention. The data are discussed around the eight detailed elements of the SR-E model that inform research quality: (1) Critical Literature Navigation, (2) Domain-Specific Knowledge, (3) Epistemological Awareness, (4) Conceptual Framework Development, (5) Methodological

Justification, (6) Transparent Data Collection Design, (7) Analytical Rigor and Interpretation, and (8) Reflective and Contextual Conclusions.

Table 3

Participants' Self-Efficacy in Eight Elements of the SR-E Model

Item	I can …	I am confident I could do this. (%)	I could probably do this. (%)	I might not do this. (%)	I do not believe I could do this. (%)	Mean	S.D.	Interpreted results
1. Critical Literature Navigation								
1.1	conduct a comprehensive review of the literature, addressing both its strengths and limitations	25.00	75.00			3.25	0.44	High S-E
1.2	apply or justify the reviewed literature in the context of the research.	30.00	70.00			3.30	0.47	High S-E
1.3	critically analyze the literature.	30.00	65.00			3.35	0.49	High S-E
1.4	effectively synthesize research studies.	35.00	65.00			3.35	0.49	High S-E
1.5	assess previous studies.	35.00	65.00			3.35	0.49	High S-E
1.6	assess the theories applied in my study.	20.00	75.00	5.00		3.15	0.49	Moderate S-E
1.7	structure the review using summaries or descriptive lists.	30.00	70.00			3.30	0.47	High S-E
1.8	organize the review using specific methods, such as thematic groupings or relational connections between descriptions.	35.00	55.00	5.00	5.00	3.20	0.77	Moderate S-E
1.9	analyze both tentative and substantive areas of research.	35.00	65.00			3.35	0.49	High S-E

1.10	construct a research argument based on logical reasoning.	25.00	75.00			3.25	0.44	High S-E
	1. Critical Literature Navigation's mean					3.29	0.50	High S-E
2. Domain-Specific Knowledge								
2.1	address the understanding of the overarching goals of the research.	30.00	70.00			3.30	0.47	High S-E
2.2	examine key beliefs or values within the discipline.	30.00	70.00			3.30	0.47	High S-E
2.3	examine the actual social or pedagogical practices within the discipline.	30.00	70.00			3.30	0.47	High S-E
2.4	examine the critical issues within the discipline.	45.00	55.00			3.45	0.51	High S-E
	2. Domain-Specific Knowledge Integration's mean					3.34	0.48	High S-E
3. Epistemological Awareness								
3.1	gain a deeper understanding of the research by applying problem-solving strategies to real-world practices.	35.00	65.00			3.35	0.49	High S-E
3.2	understand the research within the specific context of a particular research setting.	40.00	60.00			3.40	0.50	High S-E
3.3	understand the research with empowering concepts or participatory research.	35.00	65.00			3.35	0.49	High S-E
3.4	understand the research that supports change.	25.00	75.00			3.25	0.44	High S-E
3.5	effectively apply the four types of research philosophy.	15.00	65.00	20.00	0.00	2.95	0.60	Moderate S-E
	3. Epistemological Awareness's mean					3.26	0.50	High S-E
4. Conceptual Framework Development								

4.1	clearly justify the need for the research I have proposed.	25.00	75.00			3.25	0.44	High S-E
4.2	identify the originality of the research in relation to the topic areas.	25.00	75.00			3.25	0.44	High S-E
4.3	generate originality in research design.	5.00	95.00			3.05	0.22	Moderate S-E
4.4	develop a research topic relevant to actual practices in my teaching context.	35.00	60.00		5.00	3.25	0.72	High S-E
4.5	identify key theories relevant to my research topic.	45.00	40.00	10.00	5.00	3.25	0.85	High S-E
4.6	explain my research topic from the perspective of global or overarching theories.	20.00	70.00	10.00		3.10	0.55	Moderate S-E
4.7	develop context-specific research topics that contribute to the advancement of ELT in Thailand.	20.00	70.00	10.00		3.10	0.55	Moderate S-E
4.8	develop context-specific research topics that contribute to the advancement of global communities.	20.00	65.00	15.00		3.05	0.60	Moderate S-E
4.9	enhance the data by triangulating multiple data sources.	50.00	50.00			3.50	0.51	High S-E
4.10	enhance the data by triangulating multiple theories.	25.00	65.00	10.00		3.15	0.59	Moderate S-E
4.11	conceptualize my research using relevant theoretical frameworks.	30.00	70.00			3.30	0.47	High S-E
	4. Conceptual Framework Development's mean					3.20	0.54	Moderate S-E
5. Methodological Justification								

5.1	provide a justification for my research methods.	40.00	60.00		3.40	0.50	High S-E
5.2	provide a justification for my research analysis.	40.00	60.00		3.40	0.50	High S-E
5.3	integrate methodological rigor into my research.	40.00	60.00		3.40	0.50	High S-E
5.4	provide a justification for my research instruments.	45.00	55.00		3.45	0.51	High S-E
5.5	provide a justification for my research procedures.	45.00	55.00		3.45	0.51	High S-E
	5. Methodological Justification's mean				3.42	0.50	High S-E
6. Transparent Data Collection Design							
6.1	develop appropriate research methods.	40.00	60.00		3.40	0.50	High S-E
6.2	develop an appropriate research analysis approach.	40.00	60.00		3.40	0.50	High S-E
6.3	enhance the data by triangulating multiple data sources.	45.00	55.00		3.45	0.51	High S-E
6.4	develop appropriate research instruments.	40.00	60.00		3.40	0.50	High S-E
6.5	develop clear research procedures.	45.00	55.00		3.45	0.51	High S-E
	6. Transparent Data Collection Design's mean				3.42	0.50	High S-E
7. Analytical Rigor and Interpretation							
7.1	stay focused on the research objective.	35.00	65.00		3.35	0.49	High S-E
7.2	interpret data through the lens of overarching theories.	20.00	75.00	5.00	3.15	0.49	Moderate S-E
7.3	explain the data using alternative, yet relevant, theories.	55.00	45.00		3.55	0.51	High S-E
7.4	assess the findings.	25.00	70.00	5.00	3.20	0.52	Moderate S-E

7.5	validate the research tools and findings.	35.00	65.00			3.35	0.49	High S-E
7.6	apply these perspectives to your research.	30.00	65.00	5.00		3.25	0.55	High S-E
	7. Analytical Rigor and Interpretation's mean					3.31	0.51	High S-E
8. Reflective and Contextual Conclusions								
8.1	provide research results that contribute to classroom applications.	45.00	50.00	5.00		3.40	0.60	High S-S
8.2	provide research results that explain or support global theories.	15.00	75.00	5.00	5.00	3.00	0.65	Moderate S-E
8.3	provide research results that suggest a new perspective within my context.	25.00	65.00	10.00		3.15	0.59	Moderate S-E
8.4	provide research results that suggest a new perspective in global contexts.	15.00	75.00	5.00	5.00	3.00	0.65	Moderate S-E
	8. Reflective and Contextual Conclusions 's mean					3.14	0.62	Moderate S-E
	Overall Grand Mean					**3.30**	**0.52**	**High S-E**

N=20

3.25 - 4.00 High Self-Efficacy
2.50 - 3.24 Moderate Self-Efficacy
1.75 - 2.49 Low Self-Efficacy
1.00 - 1.74 Little or No Self-Efficacy

As shown in Table 3, the participants exhibited the highest level of self-efficacy—classified as high in this study—in applying the research knowledge acquired from the workshop structured within the DWE framework (Grand Mean = 3.30). Among the eight elements of research quality, six exhibited high self-efficacy, while two exhibited a moderate level, as shown in Table 4.

Table 4

Ranking of SR-E Model Elements with Mean and S.D. Values

Rank	High Self-Efficacy		Rank	Moderate Self-Efficacy	
	Element with its Order in the Model	Element Mean and S. D.		Element with its Order in the Model	Element Mean and S. D.
1	5. Methodological Justification	3.42 (0.50)	1	4. Conceptual Framework Development	3.20 (0.54)
1	6. Transparent Data Collection Design	3.42 (0.50)	2	8. Reflective and Contextual Conclusions	3.14 (0.62)
2	2. Domain-Specific Knowledge	3.34 (0.48)			
3	7. Analytical Rigor and Interpretation	3.31 (0.51)			
4	1. Critical Literature Navigation	3.29 (0.50)			
5	3. Epistemological Awareness	3.26 (0.50)			

A closer examination of methodological integrity revealed that the participants exhibited the highest self-efficacy in the SR-E model, particularly in Methodological Justification and Transparent Data Collection Design, which ranked as their strongest areas.

Methodological Justification, the fifth element, reflected their confidence in justifying research components, including research instruments and procedures (both means = 3.45). They also demonstrated high self-efficacy in justifying research methods and analysis (mean = 3.40), integrating methodological credibility into their work.

The participants also reported highest self-efficacy in Transparent Data Collection Design, the sixth element of high-quality research. This element involves clear rationales for data collection, appropriate methods, and triangulation of data sources. They demonstrated confidence in triangulation (mean = 3.45), presenting research procedures (mean = 3.45), using suitable methods (mean = 3.40), research instruments (mean = 3.40), and analysis (mean = 3.40). Their awareness of structured research is consistent to Epistemological Awareness, emphasizing the importance of well-planned research activities. Transparent Data Collection Design enhances students' research quality by ensuring that approaches, designs, and analyses align with

research objectives. This results in more reliable, valid findings (Cohen et al., 2018), and thus reinforces journal reviewers' confidence in how data collection shapes research outcomes.

Ranked second in self-efficacy is Domain-Specific Knowledge, the second element. It includes (a) research goals, (b) disciplinary beliefs/values, (c) social and pedagogic practices, and (d) key disciplinary concerns. The participants showed strong confidence in addressing disciplinary problems (mean = 3.45) and in research goals, values, and practices (mean = 3.30). The data suggest that working with experienced members in the workshop underpinned by the Reframed CoP model could enhance their awareness of critical literature review. As this process enhanced students' critical evaluations, they believed that they could identify research gaps and frame their research more effectively.

In Analytical Rigor and Interpretation, the seventh element that was ranked third, the participants were trained to validate research instruments, adhere to research focus, explain data through theories, and finally evaluate findings. As a result, they expressed the strongest skill in data explanation through relevant and alternative theories (mean = 3.55). They exhibited high self-efficacy in adhering to research focus, validating research tools (means = 3.35) and applying theoretical perspectives in research findings (mean = 3.25).

However, they expressed a moderate level of self-efficacy in evaluating findings (mean = 3.20) and explaining the data through grand theories (mean = 3.15). The data suggest challenges in applying criticality to research rigor (Miles et al., 2014). As evaluating findings and drawing conclusions are crucial for research relevance (Creswell & Creswell, 2018), doctoral students may struggle in these areas as they may be familiar with following traditions uncritically. This then limits their ability to develop critical perspectives for their own studies and evaluate those in the community.

Ranked fourth in self-efficacy, Critical Literature Navigation, the first element of the SR-E model, fosters various key features of an effective literature review, including a thorough review, critical evaluation, effective argumentation with analysis and synthesis, and engaging presentation methods. The participants demonstrated high self-efficacy in Critical Literature Navigation across eight aspects. They showed strong confidence in analyzing, synthesizing, and evaluating literature (mean = 3.25) and applying and justifying literature in their research (mean = 3.30). However, skills often challenging for novices, such as analyzing tentative research areas and logical argumentation, also scored 3.25. Additionally, the participants reported that they effectively organized reviews using summaries or descriptive lists (mean = 3.30) and conducted thorough reviews considering both positive and negative aspects (mean = 3.25). However, the participants reported moderate self-efficacy in organizing literature using thematic or relational methods (mean = 3.20) and evaluating theories (mean = 3.15). These results suggest strong foundational

skills but indicate areas for further improvement in thematic organization and theoretical evaluation.

The participants were confident in basic and advanced literature review skills, demonstrating high efficacy in conceptualizing research, shifting topics, and evaluating knowledge. Literature navigation is essential for understanding disciplinary knowledge (Boote & Beile, 2005), establishing frameworks (Maxwell, 2013), and identifying gaps (Hart, 1998), though classifying themes and evaluating theories posed challenges. However, they found classifying reviews into themes and critically evaluating theories challenging, highlighting areas for further skill development.

The final area of strong self-efficacy is Epistemological Awareness, the third element. The participants showed high confidence in four key research perspectives; research with specific meaning (mean = 3.40), problem-solving in real-world practices (mean = 3.35), empowering concepts (mean = 3.35), and research encouraging change (mean = 3.25). However, they were less confident in implementing research philosophy (mean = 2.95). The data suggest that while the workshop helped the participants understand these perspectives, they were still less familiar with applying them to their research at the start.

While the participants demonstrated strong self-efficacy in six areas, they showed moderate self-efficacy in Conceptual Framework Development and Reflective and Contextual Conclusions.

In Conceptual Framework Development, the fourth element, the participants felt moderately confident in defining research areas based on diverse perspectives. They reportedly excelled in triangulating data (mean = 3.50), conceptualizing research with relevant frameworks (mean = 3.30), and justifying research relevance (mean = 3.25). Additionally, they believed that their work exhibited originality (mean = 3.25) and mapped important theories (mean = 3.25).

However, challenges arose in using multiple theories for triangulation (mean = 3.15) and applying grand theories to their research topics (mean = 3.10). This difficulty suggests their literature reviews may be limited in scope, which could hinder their ability to apply broader theoretical frameworks. This narrow view could be one reason why non-native researchers, entry-level researchers like the ones sampled, often face lower publication rates in global academic communities (Canagarajah, 2002).

The last element, Reflective and Contextual Conclusions, showed moderate self-efficacy. This element is essential for high-quality research as it links findings to real-world applications and connects local knowledge to global theories, which can attract journal reviewers' attention. The participants were confident in classroom applications of their research findings (mean = 3.40), but less so in new perspectives (mean = 3.15) or applying global theories

(mean = 3.00) to their data interpretation. They felt their research might offer global insights but rated this aspect lower. These results suggest the participants lacked confidence in applying findings beyond their local settings, possibly due to limited analysis using global perspectives.

Since the study aimed to enhance scholarly rigor and publication opportunities, access to qualitative data was crucial. Focus group and individual in-depth interviews provided comprehensive insights. Focus groups captured general thoughts on challenges and gains related to research quality, while in-depth interviews allowed for detailed exploration of specific aspects (Kvale & Brinkmann, 2015; Patton, 2015). Together, they provided both breadth and depth of data.

Focus group interviews are designed to capture the general thoughts and perceptions of the participants. In response to the first two questions, "How did you perceive your research knowledge to generate quality research before participating in the res-pub training workshop?" and "In what ways did the instructional model influence your understanding of research quality?", the eight participants shared data in two general areas—challenges with the research elements required for producing quality research, and scholarly gains applied in their real-world practice.

Challenges with Methodological Integrity and Disciplinary Knowledge

A key issue was the participants' lack of awareness regarding methodological integration and disciplinary knowledge. They struggled with study habits, often overlooking critical research elements. Instead of engaging deeply with full-text works, they focused on abstracts or skimmed for explicit results, limiting their ability to learn from published sources. This approach led to difficulties in formulating research topics, conceptualizing perspectives, identifying relevant literature, understanding the rationale behind the Methods section, conforming to research frameworks, and addressing research gaps to develop compelling questions. They reported that these challenges hindered their research design and development.

> After this training, I've been thinking more about *my research design*. *When reading, I realized I didn't focus on authors' disciplinary knowledge*. I asked my friends from the workshop, and they hadn't noticed it either. (P5, translated focus-group interview, emphasis added)

> *I realized I didn't know anything about the model you introduced*. But the workshop made me see that I hadn't been reading full research papers properly—*I was missing key parts*. *I learned that the research rationale is very important for shaping the topic, scope, and methods. Also, the literature review and discussion seem to be very*

> *important in every section.* (P8, translated focus-group interview, emphasis added)

> Same here. I didn't read everything either. *When working on my dissertation, I mostly relied on abstracts and picked up certain parts I needed. Even when I read full papers, I didn't really analyze the research knowledge.* (P2, translated focus-group interview, emphasis added)

Scholarly Gains Applied in Participants' Real-World Practice

With another set of interview questions, "How did working within a classroom affect your learning experience?" and "What challenges did you face in applying the knowledge and skills in research acquired from the workshop?", the interviews focused on how the participants applied their research knowledge in real-world practices. The data revealed a broad range of applications.

The participants found the knowledge from the workshop was helpful in addressing teaching challenges and applying research skills to improve their teaching practices. The skills also benefited their involvement in developing a curriculum for elementary school teachers in continuing education, equipping them to better support these teachers. Additionally, the participants discussed the concept of 'face,' where Thai teachers are seen as authority figures. The workshop helped them overcome this challenge by providing concrete expertise, enhancing their professional credibility and ability to share knowledge with others.

> I didn't know much about research beyond my topic, so the workshop really helped. *I used what I learned in my own work and when teaching elementary school teachers in a continuing education program since they didn't have much research knowledge either.* (P3, translated focus-group interview, emphasis added)

> *Good teachers should know what to teach*. Having a PhD feels like a burden sometimes because *we're expected to know so much, especially about research.* (P1, translated focus-group interview, emphasis added)

> I'd say *English teachers still struggle with teaching. The workshop made me realize that having research knowledge helps with teaching too*. When we learned the importance of good research, *I saw how it could guide classroom research to solve problems for both teachers and students. A good research design is key to figuring out how to tackle teaching challenges.* (P7, translated focus-group interview, emphasis added)

Also, P4 and P6 expressed the benefit of gaining awareness about well-designed research. Initially, the participants believed they would only receive support in writing skills for research publication. However, they later realized that the quality of research itself serves as the foundation for successful publication.

> *Before the workshop, I only thought about the language used in publications. After learning more, I learned that a good start is really about having solid research knowledge and a strong research design*. (P4, translated focus-group interview, emphasis added)

> *I think the hardest part now is the research itself. I realized the first step for any researcher or writer is having solid research content and skills to design a good study*. I talked to friends in the workshop, and we all felt the same way. (P6, translated focus-group interview, emphasis added)

Considering P4 and P6's responses alongside the others, it is evident that research knowledge and skills have helped the participants plan their own research, solve personal challenges, and address issues for students who would benefit from teachers with research expertise. This highlights the importance of research knowledge serving disciplinary knowledge (Hyland, 2012), and scholarly writing skills as two key focal points, both of which made the participants more aware of research as the foundation for future publication (Tracy, 2010).

To gain deeper insights, I followed up the focus-group data with individual in-depth interviews to explore specific gains and challenges, using these questions: How do you feel your research expertise and disciplinary knowledge have evolved through this workshop? How has the workshop influenced your ability to publish your academic work? How do you plan to apply the skills and knowledge gained from this workshop in your future academic endeavors? The data revealed three main themes—Methodological Justification, evolving research expertise for future roles, and challenges faced by early-career, non-native scholars.

Participants' Experiences in Methodological Justification

The first theme from the interviews aligns to the quantitative data, highlighting the participants' reported strong self-efficacy in Methodological Justification (mean = 3.42). This perception reflected their evolving understanding of research quality and the importance of sustained knowledge in justifying research, particularly through identifying gaps in the literature. The participants recognized how crucial research knowledge and skills were in shaping well-designed projects and ensuring publishability. This became

evident as they reflected on their manuscript submission experiences, receiving reviewers' feedback, and revising their work for resubmission.

The eight key elements of research quality created for this study were helpful to the participants, even if not fully implemented in their dissertations. P1, a graduate, shared her experience working with reviewers during publication. She received feedback on the clarity of her research methods, the rationale for her approach, and the novelty of her research. Reviewers pointed out issues with participant selection, data interpretation, and adjustments to the teaching model, which P1 had to clarify and improve in response to the feedback. Below are some of the key points P1 discussed.

> During my publication process, *I had a problem with not providing enough details about how I applied the writing approach in my study. The editor pointed out that it wasn't clear what exactly the measure of the learners' writing proficiency was.* He also said that *the study didn't offer anything new because I didn't explain the two steps I added to the model.* (P1, translated individual interview, emphasis added)

P1 addressed the problems by applying research justification from both qualitative and quantitative perspectives (Patton, 2015). She explained its use in the Method section and how examining published research samples helped the participants learn effective justification. These articles consistently demonstrated clear, thorough research justification.

> *Then, I applied the strategies from the training by clarifying my explanation, adding more implementation details, and specifying the measure of students' writing proficiency. I also highlighted how my study could contribute to teaching English as a foreign language. By adding two steps to the genre-based writing approach and explaining the model in more detail,* I made it stand out a bit, which caught the editor's attention and made my work more interesting. (P1, translated individual interview, emphasis added)

The above response is particularly insightful. P1 initially recognized that her work lacked originality because she failed to identify research gaps, simply following an existing model of genre-based writing instruction. However, her work gained significance as she explained how she enhanced the genre-based framework by adding two key features—teacher support during brainstorming and feedback in the final drafting stage, both of which were tailored to her research context. She also noted that students from non-English settings still require close assistance from teachers. P1's initial fear of critiquing a renowned model was eased after receiving encouragement to analyze the model's compatibility with her research context. However, with this research justification in place, she adapted the genre-based instructional

model for her dissertation, significantly improving its effectiveness. This likely contributed to the success of her publication.

Research justification, as included in Methodology Justification, is crucial for methodological rigor and strengthens research reliability (Creswell & Creswell, 2018). Moreover, Belcher (2019) further emphasizes its importance for publishability. This may explain why P1's work was published in a Scopus-indexed journal. Similarly, P7's work also demonstrated the importance of identifying research gaps and providing robust justification, aiming to create a user-friendly manual based on corpus analysis of religious content.

> I submitted my manuscript to several journals, but the editors didn't move forward after the first review. *They could have felt my research didn't fit their scope.* Believing my corpus-based approach could impact religious readers, *I clarified the data analysis process. I also included an interpretation of religious views, which set my study apart from typical corpus studies. Finally, my work was accepted in a Scopus journal*, but I couldn't' wait a year for the process. (P7, translated individual interview, emphasis added)

When P7 highlighted the deep meaning behind interpreting certain steps in corpus analysis during her data presentation, it clarified the research for the audience, particularly the editorial team. This clarity could have potentially satisfied the editorial team, who recognized the research gaps as valuable contributions to knowledge. By integrating qualitative interpretation with quantitative analysis, the findings became more comprehensible, ensuring that the religious content presented would resonate with the journal's readership.

The data underscored the importance of Methodological Justification, the fifth element of the SR-E model, in justifying adjusted methods (Creswell & Creswell, 2018). This facilitated knowledge contribution, a key expectation for dissertation examiners and a critical component in the peer review process (Adunyarittigun et al., 2023; Erwee & Perry, 2018). As we witness, doctoral students need to demonstrate the ability to integrate knowledge effectively for publication, placing their work in academic standards expected by editors and reviewers (Golding et al., 2013).

Research Expertise and Participants' Future Roles

The second major theme from the interviews focuses on the participants' views on applying the skills gained from the workshop to their future academic work. These perspectives were categorized into two subgroups: personal development and knowledge sharing. In terms of personal development, all participants saw themselves as transitioning from doctoral students to graduates

and to novice researchers, yet they still felt the need for feedback and guidance in their research. P8 illustrates this point.

> *The feedback and guided questions from you and my peers have been most helpful in shaping my work*. I now focus on *using strong frameworks to explain data and finding gaps in the literature*. I try to *use theories from different fields so my work can be seen from multiple perspectives, as you challenged us*. Reading across disciplines really helps with this. (P8, translated individual interview, emphasis added)

The participants also emphasized the importance of seeking further knowledge, formulating engaging research topics, identifying research gaps, exploring diverse theoretical perspectives, and developing their academic identity. They also recognized the need to balance the rhetorical conventions expected from novice researchers and reviewers.

A key theme that emerged was the importance of knowledge sharing within communities, consistent with the Reframed CoP model (Thongrin, in press). Knowledge transfer is essential in learning, especially in education. All eight participants expressed intentions to apply their acquired knowledge in their academic workplaces. Four participants specifically planned to use their expertise in teaching contexts. P8 aimed to implement knowledge transfer in higher education, P3 focused on supporting elementary school teachers in a continuing education program, P7 wanted to conduct research on Thai education, and P6, a new faculty member, was preparing for his tenure process, a requirement for university faculty.

> You mentioned that *understanding the core of our discipline helps with research in both our field and others*. *Exploring research across different disciplines has been helpful for me. With good research knowledge, our work can be well-designed, and with quality and strong language, we can publish*. I agree. *If I teach at higher levels, I'll share this with my students and colleagues.* (P8, translated individual interview, emphasis added)

> I'd run a continuing education program for elementary school teachers. *I feel more confident now about sharing this knowledge and your approach with them, so they can become high-quality teachers for kids in rural schools.* (P3, translated individual interview, emphasis added)

> You mentioned that *we should do research that solves problems in our context while viewing the data through a global lens to connect our work to others*. I agree with this. *It helped us create unique work and research from our passion. This is how I plan to approach research to improve education here.* (P7, translated individual interview, emphasis added)

> I can't teach research to students yet since I'm still learning. *But my friends and I will soon need to do research and publish to renew our*

> *work contracts. These resources will be like our manuals.* (P6, translated individual interview, emphasis added)

Challenges Faced by Early-Career Non-Native Scholars

The third major theme identified through in-depth interviews highlights three critical challenges related to lower self-efficacy in three research areas. First, while the participants demonstrated high self-efficacy in Epistemological Awareness (the third element of the SR-E model), they struggled with the practical application of research philosophy, particularly ontology. As P2 explained:

> Ontology is a new concept to me, and *I find it difficult to apply in research. For now, I can use two perspectives to analyze how Thai researchers construct their research abstracts for a local conference*. (P2, translated individual interview, emphasis added)

During the workshop, the participants were introduced to key epistemological concepts, including ontology, epistemology, methodology, and axiology. Although interconnected, these concepts are distinct in research. Ontology concerns the nature of reality—what exists and what is real—while epistemology focuses on how knowledge about that reality is acquired and understood. The participants may find these concepts challenging because defining what reality is (ontology) must precede determining how to study and interpret it (epistemology), which in turn influences methodological choices (Guba & Lincoln, 1994). A lack of clarity in this relationship can lead to difficulties in conceptualizing ontology (Heron & Reason, 1997), particularly in distinguishing whether knowledge is neutral or embedded within social structures and values.

A second challenge relates to moderate self-efficacy in Conceptual Framework Development (the fourth element), particularly in integrating multiple theoretical perspectives for research triangulation. The findings indicated that most participants preferred to rely on a single theoretical framework, with only three out of eight incorporating multiple perspectives in their dissertations. As P2 noted, *"We need to graduate in time. Using multiple perspectives may not be practical now.*" The structured nature of doctoral programs, particularly in English Studies, where students must complete their degree within six years, likely reinforces this preference. Time constraints may discourage engagement with multiple theoretical frameworks, despite their potential to strengthen research validity.

The final critical challenge pertains to Reflective and Contextual Conclusions (the last element of the SR-E model). The participants expressed difficulty in applying global theoretical lenses to their data. As P5 remarked:

> You mentioned that local data need to be explained through a global lens. *Non-native researchers are expected to adopt this approach in their analysis and writing, while those in L1 contexts simply use their own lens to interpret their data. That seems a bit unusual.* I originally learned to do research to solve students' problems, but it feels like *I'm expected to do much more when planning research for publication*. (P5, translated individual interview, emphasis added)

This response highlights a critical tension between locally grounded research and the expectations of global academic publishing. Non-native researchers often face pressure to adopt Western-centric theoretical frameworks, which may not align with their local epistemologies (Canagarajah, 2002).

Overall, qualitative findings complemented the quantitative ones, offering deeper insights into disciplinary knowledge and Methodological Justification. The data from focus-group interviews highlighted Domain-Specific Knowledge, which is essential for situating research within its field and exploring new areas (Tracy, 2010). Individual interview data revealed how refining Methodological Justification enhanced research quality and reliability (Creswell & Creswell, 2018), which could then contribute to the rigor necessary for publication (Belcher, 2019). These findings reinforce the role of the SR-E model in developing research competencies and highlight the positive impact of the workshop on EFL doctoral students' ability to conduct high-quality, publishable research. Equally important, the critical challenges identified suggest the need for more institutional support in helping early-career non-native scholars navigate these complexities.

Discussions

This study revealed the data on the SR-E model that could be analyzed from three perspectives: (1) how the participants' strong self-efficacy in six areas were fostered by the Res-Pub Training Workshop underpinned by the Reframed CoP model, (2) how the SR-E model aligns with methodological standards, and (3) how the challenges of early-career, non-native scholars could be addressed, with research contributions discussed in each aspect.

Roles of the Reframed CoP Model in High Self-Efficacy in the SR-E Model Elements

The participants showed strong self-efficacy in six elements of the SR-E model: Methodological Justification, Transparent Data Collection Design, Domain-Specific Knowledge, Analytical Rigor, Critical Literature Navigation, and Epistemological Awareness. The findings indicated the

effectiveness of the Res-Pub Training Workshop underpinned by the Reframed CoP model (Thongrin, in press), situated within the DWE framework. The participants' engagement with more experienced members of the community—which included both the teacher and more experienced peers, termed as Expert-Guided Collaborative Learning, the first element of the Reframed CoP model (Thongrin, in press)—could promote their skills and abilities in these six elements of the SR-E model. This approach also allowed the participants to explore critical views in research, which is essential for their long-term career growth.

The Reframed CoP model, which I redefined from Lave and Wenger (1991) and Wenger (1998), was developed as a teaching approach to foster doctoral students' research and publication competencies (Thongrin, in press) and used in the workshop. Its six elements guided the participants' understanding of research quality and its complexities throughout the entire research process—from literature review and conceptualization to data collection and analysis. Expert-Guided Collaborative Learning and Participatory Learning Dynamics, the first two components of the model, functioned as scaffolding that helped the participants apply research rigor principles to their dissertations, where they learned from collaborative discussions and guidance from more experienced members; it also helped develop their critical skills across six elements of the SR-E model. The next two CoP elements—Academic Identity Formation and Cognitive Mastery of Academic Practice—fostered scholarly growth. The participants reported developing research competencies and high self-efficacy in conducting rigorous research and preparing publishable manuscripts. Finally, Scholarly Professional Growth and Constructive Adversities in Academic Publishing supported the participants' long-term expertise. Despite moderate self-efficacy in these areas (Thongrin, in press), the workshop with the Reframed CoP model demonstrated its potential in fostering sustained academic and professional growth.

SR-E Model in Relation to Methodological Standards

The findings showing the participants' strong self-efficacy in six elements of the SR-E model could also be discussed in relation to methodological standards, with each element serving a distinct function in research activities. These elements collectively support different stages of the research process, which I have categorized into three distinct sets based on their specific functions.

First, four of the eight elements—Epistemological Awareness, Domain-Specific Knowledge, Critical Literature Navigation, and Conceptual Framework Development—work together to articulate research goals and establish rigorous theoretical frameworks. These elements guide researchers

through the design phase and shape their understanding of where their work fits into the broader scholarly discussions (Hyland, 2012). At this stage, identifying research gaps is essential for positioning the research within existing knowledge and ensuring its contribution to the field. The participants' high self-efficacy in these elements indicates their abilities in analyzing the literature review, conceptualizing research objectives from the reviewed literature, and constructing solid foundations for their entire research.

In the same vein, the qualitative data supported the quantitative findings. The data provided deeper insights into the importance of disciplinary knowledge, situated within Domain-Specific Knowledge, the second element of the SR-E model. The participants expressed their understanding within their research fields, where they could frame their research topics, and identify related research areas. These abilities are crucial for doctoral students to offer research contribution in their fields (Holmes et al., 2020; Hyland, 2012; Tracy, 2010). This is in line with the assertion by Golde and Walker (2006) in that epistemic expertise requires a deep understanding of disciplinary knowledge to produce high-quality research.

Although the participants exhibited high self-efficacy in the three elements of the first set, they demonstrated lower confidence in Conceptual Framework Development. This finding indicates the need for further refinement of a robust theoretical framework, an important aspect for guiding the participants' research process and ensuring relevance of their studies.

The second set of elements—Methodological Justification and Transparent Data Collection Design—is essential for the whole research activity (Creswell & Creswell, 2018). The participants' reported strong self-efficacy indicates that the workshop could have enhanced their epistemic expertise in applying research methodologies. Transparent Data Collection helped them design their studies with clear rationale, and this strengthened research credibility and research replication. Similarly, Methodological Justification helped the participants design research methods align with their research questions. As a result, the participants revealed how improved justifications in their revised manuscripts impressed editorial teams. This indicates that Methodological Justification designed as an element of the SR-E model could increase the participants' research reliability (Creswell & Creswell, 2018) and meet the rigor required for publishability (Belcher, 2019).

The third set of elements—Analytical Rigor and Interpretation, and Reflective and Contextual Conclusions—serves as the analytical aspects of research and the broader implications of findings (Tracy, 2010). However, although the participants reported high self-efficacy in Analytical Rigor and Interpretation, their reported self-efficacy in Reflective and Contextual Conclusions was moderate. These findings suggest that additional training programs are needed to help the participants effectively apply theories in

analyzing their data meaningful, and contextually, which should then help enhance their understanding of both implications and limitations of their study (Creswell & Creswell, 2018; Tracy, 2010).

Overall, the participants' reported high self-efficacy in the six areas indicates a belief in their abilities to conduct high-quality research with publishable quality. The statistical and thematic analysis I integrated into the workshop was also designed to enhance their research skills, and foster their epistemic expertise. With both quantitative and qualitative methods, the workshop could foster their confidence in using two broad types of data. As a result, the findings support the role of the SR-E model in developing EFL doctoral students' abilities in designing high-quality research that meets academic standards.

Challenges of Early-Career, Non-Native Scholars

Moderate Self-Efficacy in the SR-E Model Elements

The participants' moderate self-efficacy was observed in Conceptual Framework Development and Reflective and Contextual Conclusions. These areas are critical for research conceptualization and interpretation of findings.

Conceptual Framework Development is important for researchers to frame their research scope and select theoretical grounding appropriately (Maxwell, 2013); it is during this stage where they need to justify their research topic, understand relevant theories, and examine if their research originality could be identified (Clarke & Lunt, 2014; Kiley, 2009; Lovitts, 2005). However, the participants expressed moderate confidence in this area. Although the workshop provided research foundations as seen by the eight elements of the SR-E model, more advanced exposure to both content knowledge and theoretical perspectives could be provided to the participants. As Maxwell (2013) argues, a strong theoretical framework not only positions the research within the field but also justifies its contribution. Therefore, further training to refine the participants' articulation of theoretical frameworks could be worth the additional time and effort.

Similarly, Reflective and Contextual Conclusions requires the integration of theoretical insights with practical implications. However, this goal could be challenging for doctoral students or novice researchers. Analyzing local data through the use of global theories could be difficult for them as they may focus on solving local problems without recognizing broader theoretical connections (Flowerdew, 2001; Porte, 2002). The participants may also be more familiar with data analysis of research in their local context, so they might struggle to explain their findings using more perspectives related to the issue. These possible issues suggest the need for more training, especially

in theoretical research foundations, to help doctoral students broaden their perspectives and approach their work more effectively.

As such, the Conceptual Framework Development and Reflective and Contextual Conclusions elements remain complex. Then, additional training workshops could be provided, where workshops within these areas could strengthen the CoP elements of Academic Identity Formation and Scholarly Professional Growth, where moderate self-efficacy was also observed (Thongrin, in press). These elements support researchers at different stages. Conceptual Framework Development helps define the research direction at the outset, while Reflective and Contextual Conclusions connects findings to broader, actionable insights. Researchers, of course, need both.

Tensions in Global Publishing

The findings revealed three critical challenges faced by the participants, who are the early-career, non-native scholars in academic publishing. A primary difficulty is applying ontology in selecting research methods—a common struggle among newly graduated researchers. As we all know, completing a dissertation does not necessarily equip them with the full range of skills needed to navigate the complexities of research. As research expertise develops over time, early career scholars require continuous self-study, commitment to research development, and mentorship from experienced academics (Thongrin, in press). This finding aligns with Borg (2018), who notes that inexperienced researchers often grapple with the theoretical and philosophical underpinnings of scholarly writing. Similarly, Li (2022) highlights that EFL doctoral students frequently struggle to integrate epistemic understandings with practical research applications.

As such, advisors and experienced scholars play a crucial role in guiding doctoral students through the complexities of ontology and epistemology. Supportive discussions on research assumptions, along with recommended readings (e.g., Crotty, 1998; Guba & Lincoln, 1994), can help students develop the confidence and expertise needed for conducting rigorous, well-informed research.

Another notable challenge is the participants' tendency to rely on a single theoretical perspective rather than integrating multiple frameworks for research triangulation. As emerging scholars, the participants could have had limited exposure to research triangulation with multiple theoretical perspectives. The limited exposure to diverse perspectives may narrow the scope of their literature reviews, and consequently constrain their theoretical positioning (Flowerdew, 2001). As Lillis and Curry (2010) argue, doctoral students' limited theoretical engagement can restrict their participation in global academic

discussions. This certainly applies to the inexperienced scholars of this research, as well.

Interestingly, the participants who successfully integrated multiple theoretical perspectives expressed that they had engaged in extensive reading, interdisciplinary inquiry, and acknowledged the valuable guidance they received from experts. To develop epistemic expertise, inexperienced scholars or doctoral students need to actively engage in scholarly communities and collaborative mentorship (Thongrin, in press). The findings reinforce the argument that doctoral students' academic socialization and advisor mentorship are important in shaping their capacity to navigate complex theoretical constructs (Lave & Wenger, 1991).

Another pressing concern is the tension the participants expressed in applying global theoretical lenses to their data. This pressure could be related to dominant theoretical perspectives that may lead to epistemic exclusion. This probably reflects broader challenges faced by non-native researchers, who are often expected to adopt dominant frameworks (Canagarajah, 2002).

Despite these pressures, the participants' awareness of global research frameworks remains crucial for enhancing their research visibility and engaging in international academic discussions. This paradox could present two perspectives. First, I view that resisting the demands of both universities and the international publishing landscape may be impractical for emerging scholars seeking ongoing self-development and scholarly recognition, where conformity to global expectations is somewhat unavoidable. Second, for those with greater academic freedom, the challenge may lie in balancing global theoretical frameworks with local epistemologies. Scholars (e.g., Canagarajah, 2002) advocate for this equilibrium, emphasizing the importance of integrating local knowledge systems while meeting international standards.

To address this issue, greater institutional support is needed, including training workshops that help emerging scholars bridge the gap between global theories and local epistemologies (Canagarajah, 2002). Such initiatives could foster a more inclusive academic environment that values diverse research perspectives.

Limitations and Recommendations

The findings of this study lent me both the groundwork for developing the research competencies doctoral students need for producing publishable work, and a stepping stone for further investigation. Future research could build on these findings by increasing the sample size to at least 30 participants to facilitate more comprehensive analyses, such as correlations. Additionally, I suggest that future researchers consider selecting a more manageable study design, as the longitudinal approach used in this study was

resource-intensive and may not serve the academic output demands of Thai universities satisfactorily. As such, a qualitative approach with fewer cases analyzed over time could serve these demands and offer valuable insights.

Conclusion

In this follow-up study, I discussed the SR-E model as a practical framework for developing doctoral students' epistemic expertise and methodological rigor, both of which are crucial for research publishability. As Creswell and Creswell (2018), and Tracy (2010) emphasize, maintaining high methodological standards is essential for researchers to ensure research quality and its potential for publication. The findings offer valuable insights into the central areas necessary to achieve these objectives for doctoral students. The elements of the Scholarly Rigor and Expertise model I constructed provide important guidance for doctoral training programs and curriculum design, with the potential to influence doctoral education policies. These research implications remain open for further investigations to deepen understandings of how to support doctoral researchers' journeys in research and publication.

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