

# Refining Qualitative Methods for ESL Academic Literacy Research: Reflections from a Pilot Study in Bangladesh

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## Abstract

This paper critically reflects on a pilot study within a doctoral research project investigating English as a Second Language (ESL) undergraduate students' construction of academic literacy practices at a Bangladeshi Science, Technology, Engineering and Mathematics (STEM) based university. The study assessed the feasibility of a qualitative, multi-case methodology involving reflective diaries, interviews, and document analysis with one student and one tutor. Drawing on the conceptual framing of academic literacies, insights into the student's engagement with ESL writing tasks, tutor expectations, and institutional constraints were revealed. The pilot identified methodological challenges, such as data completeness and recruitment barriers, alongside benefits like triangulated perspectives and iterative tool refinement. These reflections inform the refinement of data collection strategies and research focus for the main study, offering valuable implications for other researchers.

## Keywords

Pilot study reflection, Qualitative research, Academic literacies, ESL students, Higher education in Bangladesh

## Introduction

The construction of academic literacies by ESL students within disciplinary contexts has garnered significant scholarly attention, particularly in non-Anglophone higher education institutions where English serves as the medium of instruction (Li, 2022). This pilot study at a Bangladeshi agricultural university, part of a larger doctoral project, applies Green's (2020) academic literacies framework to explore how ESL undergraduate students negotiate assignment-based writing, tracing their disciplinary practices, knowledge development, and the cognitive practical shifts that shape their academic writing.

Pilot studies are essential in qualitative doctoral research for testing instruments, refining sampling, and uncovering ethical or logistical issues prior to full implementation (Yin, 2016; Lees et al., 2022). On a personal note, the pilot provided a valuable opportunity for critical self-reflection, revealing early insights into my evolving researcher identity and positionality (see below). In this multi-case study of ESL writing, the pilot trialled reflective diaries, semi-structured interviews, and document analysis under sociocultural constraints.

I piloted reflective diaries and interviews, triangulated with assignment documents, because reflective diaries effectively reveal students' academic writing practices and development (Green, 2013; Kuteeva and Negretti, 2016; Hawitt et al., 2022) and integrating student and tutor perspectives uncovers potential misalignments in task expectations (Carless and Boud, 2018). This dual-purpose pilot assessed both the methodological coherence of the study and its ability to capture disciplinary literacy complexities in the target context. Moreover, the pilot study offered a means to critically appraise the study's research questions, examining their clarity, scope, and alignment with

the project's broader aims:

1. What academic practices do the target students engage in while producing disciplinary writing at the target university?
2. What knowledge do they construct regarding the academic practices while producing disciplinary writings at the target university?
3. What experiences during the process of writing appear to affect cognitive or practical changes in their construction of the academic literacy?

The following sections outline the pilot design, reflect on key methodological and contextual insights, and discuss how these will inform the main study. More broadly, the paper contributes to ongoing discussions around designing context-sensitive, reflexive qualitative research in under-researched higher education contexts.

## Participants

The pilot study was conducted at a public university in Bangladesh where English functions as the primary language of instruction. Participants were purposively sampled to reflect the broader population of the main doctoral study, namely, undergraduate ESL students navigating assignment-based writing in STEM disciplines. Purposive sampling is commonly recommended for qualitative case study designs aiming to explore participants' specific experiences in depth (Palinkas et al., 2015).

With this aim, two third-year female students (aged around 20) from the Faculty of Animal Science and Veterinary Medicine of the target university were initially recruited (based on their availability), following ethical approval and informed consent procedures. While only one participant was originally required,

a second was included as a contingency against potential attrition, a strategy supported in pilot research literature to avoid data loss (Van Teijlingen and Hundley, 2001). This decision proved useful, as one participant was unable to complete the study due to the absence of a suitable assignment in the target semester. As a result, the analysis centres on a single participant who completed the required reflective diary and participated in an interview.

To triangulate student perspectives, a tutor involved in designing and assessing the assignment was also recruited. The tutor, an L2 English speaker with seven years of teaching experience at the target university, contributed valuable contextual insights into pedagogical expectations and curricular structures. His inclusion was also consistent with case study strategies that seek to capture multiple stakeholder perspectives (Yin, 2016).

Ethical approval for the study was granted by the University of Leeds Ethics Committee (Research Ethics Application Reference: 1373) before the data collection proceeded. Participants were assured of confidentiality and anonymity throughout the process, and data were stored securely in accordance with institutional guidelines.

### Data Collection

The pilot adopted a three-fold qualitative design- reflective diary, two semi-structured interviews, and document analysis- to capture literacy practices at individual, instructional, and institutional levels (Jwa, 2022).

The primary data source was a reflective diary maintained over six weeks, a method widely used to explore how students internalise academic writing practices across time and disciplines (Kuteeva and Negretti, 2016; Webster and Green, 2021; Hawitt et al., 2022). The student submitted entries via WhatsApp, using a provided template (see Appendix A) with prompts that encouraged detailed, real-time reflections on her assignment-related activities, purposes, and processes. The entries were written in English, as preferred by the participant, and were later compiled into a three-page Microsoft Word document, capturing her step-by-step engagement with the assignment.

To explore the student's experiences in greater depth, a semi-structured interview was conducted in English via Microsoft Teams. The student chose English to practise her speaking skills and, despite minor grammatical errors, was fluent and comprehensible throughout. The 71-minute interview was transcribed verbatim, and the prompts (available on request) were shared in advance to support thoughtful reflection, an approach aligned with best practices in qualitative interviewing to enhance participant agency and comfort (Kvale and Brinkmann, 2015).

A follow-up interview with the module tutor was conducted 1.5 months later using a similar format (available on request). Although his concurrent higher level study abroad led to delays and some difficulty in recalling specific instructional details (e.g. feedback provision), the interview yielded valuable insights into pedagogical expectations and institutional context. This illustrates a known limitation of retrospective data collection, where memory constraints may impact reliability (Creswell and Poth, 2018).

A range of supplementary documents was collected to enhance contextual understanding. These included the student's draft and final assignments, relevant class handouts, PowerPoint slides, and a tutor recommended textbook. The aim was to

assess whether document analysis would provide additional insight into academic literacy construction, particularly in relation to the alignment (or misalignment) between institutional expectations and student interpretations. Document-based triangulation is recognised for enhancing trustworthiness and interpretive depth in qualitative case studies (Flowerdew, 2002).

Notably, several logistical issues emerged during data collection. For example, reaching the tutor, who was studying abroad, required multiple attempts, and access to official documents such as course syllabi was inconsistent. These challenges provided early insights into the practicalities of conducting research in contexts where institutional records are decentralised and often informally managed.

### Reflection

Pilot studies are not only pragmatic trial runs but also reflective spaces where researchers engage critically with the research process, surface unanticipated issues, and refine conceptual and methodological assumptions (Maxwell, 2013). This section outlines key benefits and challenges of the pilot, and how these informed design adjustments, contingency planning, and strengthened my reflexivity as a researcher.

### Benefits of the Pilot Study

A key strength of the pilot was its ability to reveal the complex, situated nature of academic literacy practices in a STEM-based ESL context. Triangulating data from both a student and a tutor enhanced trustworthiness, as recommended in qualitative case study research (Lincoln and Guba, 1985). Remarkably, both participants described similar academic practices, such as using supplementary resources, and identified parallel forms of knowledge development: contextual (e.g., understanding assignment requirements), declarative (subject knowledge), and procedural (task approach). Both also emphasised the role of experiential learning in fostering cognitive and practical shifts in writing. This convergence increased confidence in the viability of the multi-perspectival approach proposed for the main study.

The reflective diary, despite its brevity, emerged as a rich source of insight into the student's cognitive and affective engagement with the assignment. Prior studies have suggested that diaries, particularly when used longitudinally, can reveal evolving academic identities and shifts in student self-regulation (Cohen et al., 2018). In this case, the diary not only traced the student's problem-solving process but also captured moments of uncertainty, technological struggle, and collaborative learning, all of which may have gone unreported in a single interview.

Moreover, the semi-structured interview format proved effective in eliciting detailed reflections, particularly when prompts were shared in advance. The conversational tone and rapport built at the outset seemed to encourage disclosure, aligning with Kvale and Brinkmann's (2015) suggestion that empathetic interviewing can support deeper narrative emergence. The use of tutor interview also appeared promising, though adjustments to timing and framing will be necessary (see below).

Finally, the inclusion of multiple types of artefacts such as assignments, class materials, tutor-supplied resources reinforced the feasibility of conducting document-based triangulation in this context, a technique that has been recommended in academic literacies research (Wingate, 2018).

### Challenges and Limitations

However, the pilot revealed important methodological and contextual limitations. The short duration and uneven student participation underscored the risks of relying on a small sample, particularly in unstable institutional settings. Although participant withdrawal was anticipated, it raised concerns about data sufficiency. To address this, the main study will incorporate over-recruitment to mitigate attrition, as recommended in qualitative research design (Creswell and Poth, 2018).

Second, the delayed tutor interview introduced a potential recall bias, as the tutor had to reflect retrospectively on an assignment he had set months earlier. While the discussion was rich, some details, especially those relating to instruction and student queries, were vague or generalised. This delay underscored the need to conduct faculty interviews as close to the assignment submission as possible, in line with recommendations from process tracing and retrospective interviewing studies (Yin, 2016).

Finally, technological and institutional access barriers surfaced during the pilot. For example, obtaining official course outlines proved difficult due to administrative decentralisation, and coordinating interviews across time zones required flexibility. These practical concerns are recognised as the hidden labour of doctoral fieldwork, particularly when institutional gatekeeping or geographical dispersal is involved (Lynn and Amundsen, 2011).

### Refinement of Research Design and Contingency Planning

Drawing on insights from the pilot, several refinements have been made to the main study. For example, participant over-recruitment and regular check-ins will be implemented to mitigate dropout and support diary continuity. Tutor interviews will be scheduled immediately after assignment submission to improve recall accuracy, and curriculum shifts following recent political reforms in Bangladesh will be addressed through curriculum mapping and document analysis.

The pilot also highlighted the need for methodological flexibility. While written diaries were initially planned, the student's use of WhatsApp showed the value of allowing multimodal formats, such as audio notes or text messages, which support inclusive and responsive research practices (Robinson-Pant and Singal, 2013).

Finally, the pilot reinforced the value of reflexivity in analysing data with overlapping themes (Braun and Clarke, 2019). For example, one diary entry captured both resourcefulness and uncertainty in evaluating online materials, illustrating the complex interplay of growth and challenge in academic literacy development.

To ensure continuity despite disruptions, a contingency plan has been developed. Alternate student participants could be identified at recruitment to replace any who withdraw. If diaries are incomplete or delayed, participants could be encouraged to submit retrospective reflections or audio entries in their preferred language via familiar platforms such as WhatsApp. In cases where tutor interviews are not feasible, course coordinators could serve as alternative informants. If institutional documents remain inaccessible, student-shared materials (e.g. handouts, assignment briefs) could be used to reconstruct curricular context. These strategies are intended to maintain methodological coherence under unpredictable conditions.

### Researcher's Learning and Reflexivity

Alongside methodological adjustments, this pilot study deepened my reflexivity as a researcher, particularly in navigating interviews, data interpretation, and fieldwork challenges. I learned to balance structured questioning with responsive listening during interviews and became more attuned to the interpretive nature of data analysis. Unexpected challenges, such as participant attrition and unanticipated data formats, required adaptability and reflexive thinking. The pilot also highlighted the often-overlooked relational and emotional dimensions of fieldwork, as I navigated recruitment, institutional access, and shifting timelines. These experiences shaped my understanding of research as a negotiated, uncertain process, reinforcing the importance of adopting flexibility, ethical sensitivity, and contextual awareness as a researcher in exploring academic literacies.

### Conclusion

While often viewed as preparatory, pilot studies can function as pivotal moments in doctoral research, enabling reflection, recalibration, and methodological refinement. This small-scale pilot revealed important contextual and methodological considerations in exploring academic literacies within a STEM-based ESL context in the Global South.

A key insight was the value of triangulated, multi-perspectival data. Engaging both student and tutor perspectives surfaced productive alignments and tensions, suggesting that such triangulation may yield richer, context-sensitive understandings of disciplinary writing practices (Li, 2022). The student's use of WhatsApp for diary entries, though limited in volume, highlighted the potential of low-barrier, flexible tools for capturing affective, in-the-moment reflections, especially in settings where extended formal writing may be challenging (Lillis, 2008). Its encrypted nature also supported data security.

The pilot also illuminated the practical and relational complexities of fieldwork in under-resourced or institutionally fluid contexts. Challenges such as delayed interviews, limited access to documents, and institutional instability underscored the need for adaptable strategies and researcher sensitivity (Lynn and Amundsen, 2011), echoing broader calls to recognise the non-linearity of qualitative research (Ravitch and Carl, 2021). Several methodological adjustments emerged from these experiences: over-recruiting to address attrition, rescheduling tutor interviews for better recall, integrating curriculum mapping, and allowing student-preferred digital platforms for reflection. These are not merely procedural refinements but reflect a deeper commitment to context-responsive and ethically grounded design (Robinson-Pant and Singal, 2013).

Crucially, the pilot supported my growth as a researcher, highlighting the emotional dimensions of fieldwork and prompting greater reflexivity around positionality and meaning-making. For researchers working in multilingual, non-Western, or unstable institutional contexts, this study underscores the generative potential of uncertainty. Rather than signalling failure, disruptions such as participant dropout or access barriers may reveal the very conditions under which academic literacies are formed, negotiated, or resisted (Canagarajah, 2002).

Ultimately, this pilot affirmed the feasibility and relevance of the proposed methodological framework and research questions, while reinforcing the value of pilot studies as sites for critical learning and methodological development within doctoral research.

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## Appendix A

### Template for Writing the Reflective Diary (for student participants)

Please read the following points carefully before you start maintaining your reflective diary. Please feel free to contact me (\*\*\*) on my mobile phone number: \*\*\* or via email- \*\*\* if any of the following points is unclear to you or you have any query at any time.

The following points will help you to understand what you are expected to reflect and take notes on in the reflective diary which you are maintaining against your targeted disciplinary assignment. Please note that the following points are just guidelines not an exhaustive list. Please take notes on anything that you will be doing in writing the assignment even though you think this is not important or optional. Please take notes on the very days you have done something related to writing your assignment and mention dates in the diary so that I can see the time flow of the activities you are doing related to the assignment writing. The more accurate and detail your reflection will be on the writing process of your assignment in the diary, the richer data I will get for my study. So, the points (and beyond) that you need to reflect on while taking notes in the reflective diary are-

- What is the writing task about (topic) for which you will be keeping the diary?
- What are the task requirements/instructions?
- What is the purpose of the assignment?

- When do you have to submit the assignment?
- Description of the writing process (take notes on any activity that you are doing to complete the assignment, please consider the following questions as example of activities)
- With whom are you interacting to understand and accomplish the task, and what is the purpose behind the interactions?
- From where and how are you collecting required information to write the assignments?
- Why and how are you using the information in the assignments?
- Are you making any draft of the assignment- written draft or mental plan?
- What supports (i.e., from your faculty, tutor, or any other body) are you getting to accomplish the assignment?
- What problems are you experiencing in doing the assignment?
- What are you doing to resolve the problems?
- What helped you to better understand the nature and requirements of the assignment?
- What are you doing to finalise your writing for submission?
- What are you learning by doing the assignment?