

# Insights at the Crossroads: Reflecting on the Challenges, Opportunities, and Lessons Learnt from my Pilot Study

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## Abstract

This article discusses the importance of a pilot study in undertaking qualitative research, in line with reflexive approach. The pilot work was conducted in preparation for a thesis examining the integration and impact of Write&Improve system on Malaysian ESL secondary school teachers' writing assessment literacy and their pedagogical practices within a technology-enhanced writing instruction context. This reflection highlights the benefits of pilot studies by detailing the practical and methodological challenges faced during the pilot phase and the subsequent adjustments made for the main study. Doing the pilot study proved to be valuable in three ways. These include: (1) facilitating essential adjustments that resulted in a satisfactory procedure for the main study, (2) deepening the researcher's understanding of practical and contextual challenges, thereby enhancing methodological rigour and maintaining ethical standards, and (3) fostering reflective practice that contributes to researcher's professional growth as a postgraduate researcher.

## Keywords

Pilot  
Reflection  
Reflexivity  
Insights  
Challenges  
Learning  
Lessons

## Introduction

Assessments, which are essential to education (Walsh, 2017), encompass summative and formative approaches. In classroom-based formative assessments especially, assessing students' works and providing timely feedback to their progress are critical in the teaching and learning processes. Like other language skills, writing assessments present a considerable challenge to teachers due to the substantial time and effort required from both teachers and students (Dikli, 2010; cited in Nunes et al., 2021). Technology-based interventions, notably Automated Writing Evaluation (AWE) system, address such barriers by providing quick, detailed feedback. Despite AWE's rising popularity and potential, it remains unclear how AWE aids Malaysian ESL secondary teachers' writing assessment practices. Employing a multiple case-study approach, this project seeks to

- i. narrow the knowledge gap regarding teachers' writing assessment practices in AWE-supported writing classrooms, and
- ii. shed light on the practical implications of utilizing AWE tools within Malaysian ESL secondary school context.

Pilot studies are instrumental in identifying and resolving ethical (Shakir and Rahman, 2022) and methodological issues (Van Teijlingen and Hundley, 2002) that could jeopardize the main study and violate participants' rights. They are key to refining various aspects of a final study, including its design, fieldwork procedures, data collection instruments, and analysis plans (Yin, 2011). Majid et al. (2017) further emphasize that pilot studies, particularly in qualitative research, ensure the clarity, appropriateness, and feasibility of interview protocols, data collection tools, and analytical procedures within specific contexts. To

ensure the quality and rigour of this project, conducting a pilot study was therefore essential. The overall purpose was to assess the feasibility of the interview questions and fieldwork procedures prior to the actual fieldwork. It also prepared me for the unanticipated issues before entering the field.

I chose to pilot semi-structured and stimulated-recall interviews because these approaches are particularly sensitive to context, interpersonal dynamics, and language nuances (Sampson, 2004). Interviews necessitate a clear and effective questioning technique that enables participants to express their beliefs and experiences comprehensively. The pilot provided insightful feedback regarding the clarity and depth of the questions, which informed necessary adjustments to obtain rich data (Kim, 2011).

Reflection on this piloting hold significant academic and practical value. Academically, this process enhances methodological rigour by meticulously refining research instruments and procedures before the full-scale implementation. This ensures the validity and reliability of the data (Malmqvist et al., 2019). Practically, piloting helps identify contextual challenges informing adjustments to data collection instruments and fieldwork procedures to better suit the school settings and the cultural dimensions of Malaysian classrooms. Such reflective practice contributes to researcher preparedness, thereby improving the quality and applicability of findings. This reflection enriches broader methodological discussions by illustrating how research unfolds in dynamic, often unpredictable contexts. It is hoped that by sharing these insights, my reflective narrative contributes to the collective knowledge that aids other postgraduate researchers in navigating the complexities of real-world inquiry.

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### Ethical Considerations

Ethical consideration encompasses ethical approval. This study was approved by the University of Leeds Research Ethics Committee (Approval Number: 1229). Research also involves research sites and obtaining permission for data collection (Creswell, 2013). It also requires careful consideration of the sensitivity of findings and the researcher's credibility in the event of unfavourable disclosures of information. Therefore, approvals were sought and obtained from the relevant gatekeepers: the Ministry of Economy, the state and district education departments, and the school principal.

Patton (2002) emphasizes that all individuals involved in a study should voluntarily consented to participate, free from coercion or undue pressure. To ensure that this ethical consideration was fulfilled, each pilot study participant was given a consent form alongside the Participant Information Sheet (PIS). I briefed them beforehand that this piloting was to be done on a voluntary basis, and they were permitted to withdraw from the study after the process had started. I also highlighted that the withdrawal would not be possible once the data had been analysed. The teachers were also asked to confirm their consent at the beginning of the interviews.

To develop trust and safeguard participants' privacy, all names and identifying information were pseudonymised in the interview transcriptions, students' essays and AWE system-generated data. This is important as measuring the dangers of a specific context to individuals is often challenging or infeasible (Patton, 2002). To ensure the confidentiality of the individuals, teacher participants were assigned numerical identifiers (e.g., Teacher 1, 2, and 3) while schools and students were designated using alphabets (e.g., School A and B, Student A, B, and C).

### Sampling and Piloting Procedures

Sampling is essential in case study research (Priya, 2021). This pilot study employed a criterion-based sampling strategy, which involves selecting participants who meet specific criteria for quality assurance (Creswell, 2007). The first piloting involved two doctoral students from the School of Education. Since their research focuses on technology-enhanced learning, they were selected for their capacity to provide insightful feedback on the semi-structured interview questions. The purpose was to evaluate comprehensibility, identify overlaps, and suggest improvements. The questions were categorized into five themes: participant background, understanding of teachers' writing assessment literacy (WAL) and Technological Pedagogical Content Knowledge (TPACK), contextual factors, support and resources, and overall reflection on the Write&Improve system.

Initially, the questions were aligned with specific research questions, resulting in overlaps. To enhance clarity, some questions were rephrased, redundant items were eliminated (e.g., school location and type), and new questions were added to better address the research questions. The initial interview guide included numerous questions that could overwhelm the research participants. To alleviate discomfort, some questions were eliminated from the semi-structured interview and were posed in stimulated-recall interview instead. The revised semi-structured interview guide was distributed to the two PGRs for feedback.

Another pilot study was conducted with three teacher participants, aimed to assess the comprehensibility and feasibility of the semi-structured and stimulated-recall interview (SRI) as

well as Think Aloud protocol (TAP). Using criterion-based and convenience sampling strategy, they were chosen on the basis of; first, a belief that three teachers would suffice to highlight any possible flaws in the research design and instruments, and second, that these teachers share similar characteristics with the target participants (Teijlingen and Hundley, 2002). They were English teachers who integrated AWE tools into their writing classrooms. These teachers were also professionally known to me through our involvement in intra and inter-states workshops and meetings for English teachers. They were approached by e-mail and Whatsapp application explaining what the pilot study entailed and the significance of their contribution to this research.

The semi-structured interview guide comprised 50 prompts, administered in a single session. While the number of prompts could appear extensive, they served as potential prompts relevant to the research questions. In the interviews, I posed the prompts flexibly to elicit examples, decisions and contextual constraints. This meant I did not administer the prompts verbatim or in full to every participant. They were used only when the participants' responses were insufficient to address the research objectives comprehensively. This maintains the conversational quality of a semi-structured interview while ensuring consistent coverage of key domains of the research.

Prior to conducting the TAP and SRI, I gathered teaching artefacts used as the stimuli for SRI. I arranged for an online meeting to discuss how the artefacts could be collected in a way that was convenient to the teachers. I obtained access as a collaborator on the AWE system, teachers' timetable, photos of the classroom layout and resources, teachers' and school background information via Microsoft form, and screen recording of teachers' TAP as well as extracted the system-generated data on students' submission frequency and scores for each writing task in Microsoft Excel format.

The SRI was piloted two days after the semi-structured interview and TAP took place. The initial plan involved requesting the teachers to video or screen record at least three usages of the AWE system. After consultation with one teacher, it was determined that this was impractical due to time constraints resulting from teachers' heavy workload and the significant time required to screen record multiple usages. Considering these constraints, I redesigned the video-based SRI procedure. The teachers were asked to record their TAP session documenting their interactions with the system while verbally explaining the typical activities upon logging in. They were given instructions on how to conduct the TAP session. In the TAP guide, I requested them to reflect on their decision-making processes whenever they use the AWE system. Among the prompts used were:

- i. Can you walk me through how you use the AWE system when you log into the system?
- ii. Explain what you normally do when you use the system?

The recording was then used during the SRI session where prompts were used to probe deeper into the teachers' actions and decisions when using the system. The prompts included, but not limited to, the following:

- i. What were your thoughts when using the system with this student?
- ii. What were you thinking when you decided to do this?

- iii. Why did you decide to provide additional feedback and your own score? Why? / Why did you decide not to provide additional feedback and your own score for this student?

Apart from the TAP recording, students' essays, system-generated data on students' submission frequency and scores, teachers' timetable, photos of classroom layout and resources therein, and the background information obtained were utilized during the SRI. They were used to assist teachers' reflection on their assessment practices and whether their practices had changed from the first to the current use. They were also used to probe deeper into how contextual factors (re)shape the way teachers use the system. I invited the teachers to think about the factors that enable or hinder the integration of AWE tools into their classrooms. I paused them when necessary and used the stimulus to facilitate the discussion. The pilot study spanned three weeks with each interview and SRI session lasting between 1 and 2 hours. All the interview protocols and prompts were revised based on the findings from the pilot study and feedback from the participants.

### Reflection - Methodological Issues and Research Design

Janghorban et al. (2013) argue that a qualitative researcher can improve their research skills and engage more effectively in qualitative inquiry through reflecting on the insights gained from a pilot study, thereby increasing the credibility of their work. The pilot study was useful in providing insights into the methodological issues and informed the final research design with fresh empirical evidence. Methodologically, it offered information regarding relevant interview questions. While my initial choice of semi-structured interview prompts appeared robust, the pilot revealed that some questions were overly structured and could be misleading, limiting participants' authentic expression of their experiences and thoughts. Upon reflection, I acknowledged the need to balance structure with flexibility to encourage richer, more genuine responses. Drawing on the guidance from Brinkmann and Kvale (2018), I refined my interview guides, both the semi-structured and stimulated-recall interviews to facilitate greater conversational flow while still maintaining consistency with my research questions. This process involved changes such as rewording, rephrasing, sequencing, deletion and addition in the interview questions as well as dividing the interview into several sessions due to the number of questions involved (all questions are available from the author on request through email).

For the stimulated-recall interview, questions which were irrelevant to the stimulus (i.e., questions about general practices or information) were moved from the SRI guide to the semi-structured interview as further potential prompts. Questions and stimulus that held little value to address the research questions were removed. For example, I eliminated photos of classroom layout and the resources since they held little value as the contextual factor that contributed to teacher's actions and decision making when using the system. This decision was made based on the findings and after contacting potential teacher participants to ask whether they use the system inside or outside their classrooms. As they use the system more frequently outside the classrooms, having the classroom photo and asking questions on how classroom layout and the resources influence the use of W&I in the class were not meaningful.

### Practical Challenges in Data Collection

The piloting also helped identify and resolve practical challenges in the data collection process and allowed for the refinement of the fieldwork procedure. For instance, the initial plan included screenshots of teachers' reflection as part of their daily routine. However, it became evident that the teachers did not use the system during class contact hours. This meant no reflections were included in their lesson plans. Recognizing this, I had to adjust the data collection instruments. Importantly, I aimed to avoid introducing additional method that could increase the burden on the already time-constrained participants. The instruments were redesigned to accommodate the situation while still capturing reflective insights. This includes integrating prompts for reflection during interviews and revising the Think-Aloud protocol to encourage deeper reflection from the teachers. This aligns with established practices in qualitative research, highlighting the importance of adapting to participants' contexts to maintain ethical engagement and ensure data quality (Creswell and Poth, 2018). These changes were grounded in a reflexive approach which acknowledges the dynamic relationship between the researcher and participants (Berger, 2015).

### Data Analysis and Refinement of Interview Guide

While the pilot's main purpose was to test the procedures and the interview guides, I conducted a rapid, light-touch analysis of the interviews to ensure alignment with the study objectives. Teachers reported using the AWE tools sparingly due to contextual constraints around device access, time, Wi-Fi connectivity, limited funding, student-related factors and limitations inherent to the AWE system. They framed support as institutional and informal, self-initiated troubleshooting rather than formal training, and expressed positive but cautious attitudes toward AWE integration, highlighting fit with lesson goals, curriculum and assessment requirements, and students' willingness. This broadly matched my expectations about practices and contextual factors, but I had expected more references to how teachers' technological pedagogical content knowledge (TPACK) impacted the way AWE tools were utilized. This prompted me to strengthen questions on how each type of knowledge influences teachers' assessment practices when using AWE tools.

### Environmental Factor and Contingency Plan

During the pilot study, I encountered an unanticipated challenge, i.e., flooding in the area where the data collection was planned. Despite being infrequent, the disruption underscored the necessity of fieldwork contingency planning. This experience taught me that researchers should remain flexible and responsive to environmental and contextual factors that are beyond their control. I revised my timeline and identified alternative arrangements to ensure the continuity of the study. For others facing similar challenges, it is crucial to incorporate flexibility into research designs and timelines, and to anticipate even low-probability disruptions as part of ethical and effective fieldwork planning (Marshall and Rossman, 2016).

Reflecting critically on the pilot experience, I observed a notable change in my self-perception as a researcher. Although I was initially confident in theoretical knowledge, the practical application exposed weaknesses in my communication and adaptability skills. This realization has proven to be highly valuable in skill-building in areas such as interviewing and active listening- skills I now appreciate as integral to effective qualitative research.

## Conclusion

The pilot study informed the actual fieldwork in three significant ways. First, the piloting of the interviews led to necessary adjustments which ultimately established a satisfactory procedure for the main data collection. Second, the lessons learnt from the process developed my understanding of practical and contextual challenges which enhances methodological rigour and maintains ethical engagement. Third, the reflective practice contributed to my personal upskilling as a postgraduate researcher and prepared me in conducting the actual fieldwork.

To fellow postgraduate researchers, it is important to recognise pilot studies as a reflective practice. A practice that serves not only as a personal learning tool, but also as a vital scholarly activity that strengthens methodological rigour and significantly contributes to the research community. By acknowledging and adapting to challenges, such as unforeseen environmental disruptions, participant constraints, or methodological issues, we enhance the credibility and transparency of our work and add to a more realistic understanding of fieldwork. As Finlay (2002) posits, reflexivity situates the researcher as an active participant rather than a detached observer, whose decisions significantly influence the research process- an essential consideration in qualitative studies.

## References

- Berger, R. 2015. Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15 (2), pp.219–234.
- Brinkmann, S., and Kvale, S. 2018. *Doing Interviews*. 2nd ed. Thousand Oaks, CA: SAGE Publications.
- Creswell, J.W. 2007. *Qualitative inquiry and research design: choosing among five approaches*. 2nd ed. Thousand Oaks, CA: Sage.
- Creswell, J.W. 2013. *Qualitative inquiry and research design: choosing among five approaches*. 3rd ed. Thousand Oaks, CA: Sage.
- Creswell, J.W., and Poth, C.N. 2018. *Qualitative inquiry and research design: choosing among five approaches*. 4th ed. Thousand Oaks, CA: SAGE Publications.
- Finlay, L. 2002. "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, 12 (4), pp.531–545.
- Janghorban, R., Latifnejad, R., and Taghipour, A. 2013. Pilot study in qualitative research: the roles and values. *Hayat, Journal of School of Nursing and Midwifery*, 19 (4), pp.1-5.
- Kim, Y. 2011. The pilot study in qualitative inquiry: identifying issues and learning lessons for culturally competent research. *Qualitative Social Work*, 10 (2), pp.190–206.
- Majid, M. A. A., Othman, M., Mohamad, S. F., Lim, S. A. H., and Yusof, A. 2017. Piloting for interviews in qualitative research: operationalization and lessons learnt. *International Journal of Academic Research in Business and Social Sciences*, 7 (4), pp.1073–1080.
- Malmqvist, J., Hellberg, K., Möllås, G., Rose, R., and Shevlin, M. 2019. Conducting the pilot study: a neglected part of the research process? Methodological findings supporting the importance of piloting in qualitative research studies. *International Journal of Qualitative Methods*, 18, pp.1–11.
- Marshall, C., and Rossman, G. B. 2016. *Designing Qualitative Research*. 6th ed. Thousand Oaks, CA: SAGE Publications.
- Nunes, A., Cordeiro, C., Limpo, T. and Castro, S.L. 2021. Effectiveness of automated writing evaluation systems in school settings: a systematic review of studies from 2000 to 2020. *Journal of Computer Assisted Learning*, 38, pp.599-620.
- Patton, M.Q. 2002. *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, CA: Sage.
- Priya, A. 2021. Case study methodology of qualitative research: key attributes and navigating the conundrums in its application. *Sociological Bulletin*, 70 (1), pp.94-110.
- Sampson, H. 2004. Navigating the waves: the usefulness of a pilot in qualitative research. *Qualitative Research*, 4 (3), pp.383–402.
- Shakir, M., and Rahman, A. 2022. Conducting pilot study in a qualitative inquiry: learning some useful lessons. *Journal of Positive School Psychology*, 6 (10), pp.1620-1624.
- Van Teijlingen, E. R., and Hundley, V. 2002. The importance of pilot studies. *Nursing Standard*, 16 (40), pp.33–36.
- Walsh, B. 2017. *When testing takes over: an expert's lens on the failure of high-stakes accountability tests – and what we can do to change course*. Harvard Graduate School of Education. [Online]. 3 November. [Accessed 14 May 2023]. Available from: <https://www.gse.harvard.edu/news/uk/17/11/when-testing-takes-over>
- Yin, R.K. 2011. *Qualitative research from start to finish*. New York: The Guilford Press.