

AN INQUIRY APPROACH TO FACILITATE REFLECTION IN ACTION RESEARCH FOR ESL PRE-SERVICE TEACHERS

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Abstract: Reflection is a significant skill in action research, but many practitioners still display unsatisfactory reflective thinking levels, especially among teachers. Pre-service teachers, in particular, have voiced issues concerning their reflections in action research. Although reflections are personal and have infinite forms, research has demonstrated that using an inquiry approach can build reflection skills. This study aimed to identify pre-service teachers' and their respective lecturer-supervisors' views on the use of an inquiry approach to facilitate the reflection aspect in action research. A question-structured checklist was provided to the research participants to guide their reflection in action research. Data were collected from twenty (n=20) English as a Second Language (ESL) pre-service teachers and five (n=5) lecturer-supervisors in an Institute of Teacher Education Malaysia campus through follow-up interviews and focused group discussions. Findings revealed the benefits of the inquiry approach used in guiding the pre-service teachers' reflections in their action research and writing the final reports. Feedback from the lecturer-supervisors suggested that the use of the inquiry approach had guided the pre-service teachers' reflections to be more organized and relevant to the focus in each section in the report. Future recommendations on the application of an inquiry approach are suggested.

Keywords: reflection, action research, inquiry approach, ESL pre-service teachers

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Teachers teaching English as a Second Language (ESL) have an immense responsibility to assist learners in learning the language, while also providing a meaningful learning environment for them. On the other hand, ESL pre-service teachers may face issues and challenges due to the lack of pedagogical experiences. Hence, they need ample scaffolding, support and preparation before being assigned to schools. Introducing action research to the ESL pre-service teachers, therefore, is perceived as a way to assist them to become future professionals who can think critically and reflectively about teaching and themselves as teachers (Zambo & Zambo, 2007). It would provide opportunities for them to obtain new knowledge and build new understandings in English language teaching and learning (Goh & Loh, 2013) while dealing with their previous beliefs brought with them when they came into the teacher education process (Darling-Hammond & Baratz-Snowden, 2005).

Acknowledging the importance of action research in developing the professional and pedagogical skills of ESL pre-service teachers, the Malaysian Ministry of Education decided to introduce and include action research in the teacher education programme at the Institute of Teacher Education Malaysia (Institut Pendidikan Guru Malaysia, 2013).

Reflection is a significant element in action research that guides teachers to “develop meaningful research questions, design effective methods for answering the questions, collect information relevant to the questions, and analyse the data collected to determine appropriate instructional techniques and strategies” (Slobodzian, 2014, p. 44). It provides them with self-learning opportunities in their efforts to improve practice by “examining their previous knowledge and relating them with current ones” (Abdul Rahman, Mohammad Yusof, & Baharun, 2012, p. 485), as well as by making them “more accepting to develop various teaching strategies” (Sowa, 2009, p. 1027). Teachers engaged in action research are directly involved in self-reflection as they evaluate themselves on their own teaching and learning context. They assess their actions and subsequently rebuild their beliefs and interpretation of their actions; consequently, allowing them to understand their own self-values to better adapt to the new perspectives gained.

Previous studies, however, have shown unsatisfactory reflective thinking levels in the practitioners’ action research reports (El-Dib, 2007; Hagevik, Aydeniz, & Rowell, 2012; Madzniyah, 2012; Val Madin, Lee, & Suyansah, 2016; Yaacob, Walters, Ali, Abdullah, & Walters, 2014). Among the possible reasons for this are limited understanding on the purpose of writing reflections

(Roberts, 2016), lack of cognitive ability and encouragement (Ostorga, 2006), as well as inadequate guidance on performing reflections for both the educators and learners (Canniford & Fox-Young, 2015; Ryan & Ryan, 2012). Without proper guidelines, reflection in action research can be a struggle, especially for the pre-service teachers who are considered novice researchers due to their insufficient teaching experiences. As they are also in the process of developing their own teaching and learning beliefs and values, it may impact their reflective thinking process.

The practice of reflection in teacher education is common in pre-service teachers' practical training. Ample approaches and strategies have been presented to help them enhance their reflection skills. Jones and Jones (2013) explored the use of instructional approach to promote reflective inquiry, while Arrastia, Rawls, Brinkerhoff and Roehrig (2014) introduced observation guidance to the preservice teachers in their future-oriented reflection. Similarly, Kori, Mäeots and Pedaste (2014) believed in scaffolding reflections using prompts as guided reflection. This was also true for Luk (2008) by providing the pre-service teachers with guidelines as prompts for writing reflections. Lane, McMaster, Adnum and Cavanagh (2014) used a developed framework not only to evaluate the pre-service teachers' reflections, but also to provide a model in organizing their reflective responses. Myers (2012), on the other hand, implemented a lesson study as a strategy to facilitate the pre-service teachers' reflections. All these clearly illustrated diverse strategies were studied and used in an attempt to enhance reflective thinking skills and reflective writing. Nevertheless, necessary scaffolding is currently inadequately delineated to provide clear reflection guidance for the pre-service teachers particularly in their action research projects as the focus is often in their teaching practical training.

Inquiry is one approach that potentially guides the pre-service teachers in doing reflection. The use of questions in facilitating teachers' pedagogical practices is supported by scholars and researchers in the teacher education field. Since reflection is the act of critically exploring what one is doing, why one decided to do it, and what its effects have been (Mertler, 2009), using questions as an inquiry approach in reflection creates an awareness in the pre-service teachers on the learners' progress (Liu & Zhang, 2014), in discovering new ideas or concepts (Mäeots, Pedaste, & Sarapuu, 2011), and improving teaching and learning practices (Ulvik, 2014).

Inquiry approach is pertinent to inquiry-based learning which is a way of asking questions, seeking information, and finding new ideas related to an event (Duran & Dökme, 2016). It promotes self-directed learning as the learners themselves acquire skills to identify information/issues, ask questions (self-evaluation), think critically, and find solutions. It encourages the learners to participate in giving explanations, making reflections, and strengthening their critical thinking abilities (Hwang, Chiu, & Chen, 2015). Inquiry approach is the basis for understanding by providing the opportunity for self-analysis and reflection.

Spronken-Smith, Walker, Batchelor, O'Steen, and Angelo (2012) proposed three modes of inquiry namely structured, guided and open. The Reflection Checklist in Action Research used in the study employed the second mode which was guided inquiry as questions were provided to stimulate the inquiry. On the other hand, the pre-service teachers were directed in terms of exploring the questions.

This study investigated the views of relevant stakeholders on the use of an inquiry approach to facilitate ESL pre-service teachers' reflection in action research. It specifically aimed to achieve the following objectives:

1. To identify the ESL pre-service teachers' views on the use of an inquiry approach in their reflective practice in action research; and
2. To discover the lecturer-supervisors' insights on the use of an inquiry approach in the pre-service teachers' reflective practice in action research.

METHOD

This qualitative study involved 20 ESL pre-service teachers and 5 lecturer-supervisors in one of the Institute of Teacher Education Malaysia campuses. The pre-service teachers were in their final year of their Bachelor of Education (TESL) degree programme. They were required to conduct an action research project as part of the requirements before graduation. Prior to implementing the projects, they were introduced to concepts of action research. The courses were TSL3133 Action Research 1 (Methodology) which was done in semester 6 and TSL3153 Action Research 2 (Implementing and Reporting) in semester 8. They partook two phases of practical training in semester 5 and 7, as well as an internship in semester 8. Using their practical teaching experiences, they were asked to prepare an action research proposal (submitted in semester 6) and conduct an action research intervention during semester 7

(cycle 1) and internship (cycle 2). At the end of semester 8, they submitted their action research reports to their respective lecturer-supervisors for evaluation. These lecturers were responsible for guiding the assigned pre-service teachers throughout the action research process as well as during the writing of the final report. Most lecturers had more than five years of experience in supervising action research projects and had conducted and presented their action research in various conferences and seminars.

Prior to conducting and writing their final action research reports, both the pre-service teachers and the lecturer-supervisors were introduced to the Reflection in Action Research Checklist (Appendix A). The contents emphasized in this checklist were (a) previous teaching experiences, (b) research context and focus, (c) initial data collection, (d) research objectives and questions, (e) research action and implementations, (f) participants, (g) findings, (h) reflection, as well as (i) further recommendations. Rather than using a guideline which directly informed what to be put in their reflections, the questions in each of the section in the checklist act as a prompt to stimulate and trigger the pre-service teachers' inquiry, critical and reflective thinking. The questions asked in the checklist are the fundamental aspect in the inquiry approach. They promote self-reflection which is central to the inquiry approach of learning and is based on the Socratic method of using questions to enhance understanding.

Guidance was provided to both the pre-service teachers and their lecturer-supervisors on how the pre-service teachers could apply the checklist in their reflection in the action research projects. There were no specific answers to the questions in the checklist, but the pre-service teachers decided on their own on how to explore the questions. Since the sections in the checklist were aligned to the content of their action research final report, the pre-service teachers used the questions in each section to reflect and assess their planning, implementation, and in reporting the findings of their action research. Since the action research projects mostly involved two cycles of Plan-Act-Observe-Reflect, the pre-service teachers had the opportunity to do two rounds of reflection and reassessment using the questions in the checklist.

The sections and the questions in the checklist were developed based on the guidelines to doing action research provided by the Institute of Teacher Education Malaysia Guide Book on Action Research. The focus of the checklist was on the content and format required in their final action research report (Institut Pendidikan Guru Malaysia, 2016). Since inquiry approach was

accentuated in this study, questions were used in the checklist to guide the pre-service teachers' reflection in action research. Three expert reviewers were assigned to establish the trustworthiness of the checklist in terms of its applicability, practicality, content/relevance, language use, and organizations. These expert reviewers were chosen based on their various and vast expertise in areas such as English language, research methodology, and teacher education. Based on their feedback, the checklist was then revised and improved for this study.

Data for the study were collected from two main sources which include focus groups discussion with four groups of pre-service teachers and individual interview session with the lecturer-supervisors. In the focus groups discussion, I acted as the moderator of the session. I was not involved in their action research as one of the lecturer supervisors. At the start of each session, the pre-service teachers were informed on the confidentiality of their identity and pseudonyms would be used to refer to them in this report. This was done to ensure that the pre-service teachers would not feel intimidated and would be willing to share their honest opinions. Similar concept was applied in the interview session with the lecturer-supervisors. These sessions were conducted after the pre-service teachers submitted their action research reports and had been evaluated by their lecturer-supervisors. The focus group discussion guide (Appendix B) and interview questions (Appendix C) were developed and reviewed by three selected expert reviewers to establish the trustworthiness of these instruments for use in this study. Each of the focus group discussion and interview session lasted around 30 minutes and was recorded using an audio recorder with the participants' consent and awareness.

The transcribed focus group discussions and interviews were then analyzed using a thematic analysis with reference to the research questions of this study. The data analysis process employed in the study was Braun and Clarke's (2006) six thematic analysis procedures. The researchers had created several data analysis codes for the report of the findings (see Table 1). Pseudonyms were given to ensure confidentiality and anonymity of the research participants in the focus group discussion and interview transcriptions.

Table 1. Data Analysis Codes Used in the Study Finding Report.

Data Analysis Code(s)	Description(s)
FGD1	Focus Group Discussion 1
FGD2	Focus Group Discussion 2
FGD3	Focus Group Discussion 3
FGD4	Focus Group Discussion 4
INT1	Interview Session 1
INT2	Interview Session 2
INT3	Interview Session 3
INT4	Interview Session 4
INT5	Interview Session 5
P	Page
20171101	Date
00:00	Time

FINDINGS AND DISCUSSION

Findings from the collected data were triangulated by way of substantiating and verifying them based on the analyzed transcriptions of four focus group discussion sessions with the pre-service teachers and the transcriptions of the five interview sessions with the lecturer-supervisors. This enabled the researchers to identify several emergent themes relevant to the research objectives. They were (a) awareness of one's own teaching practices, (b) awareness of other contributing factors to the teaching and learning outcomes, (c) awareness of own values and beliefs, and (d) organized and focused reflections. Elaboration of the limitations on the use of the reflection checklist would also be presented. The discussion would be based on findings from the data analyses. In addition, it would be in parallel to relevant theories as well as previous studies on inquiry approach and reflection.

Developing Awareness of One's Own Teaching Practices

Reflection is a fundamental element in pre-service teachers' initial training programme. Its value in promoting teacher's professional development and in

improving the quality of teaching and learning (Mathew, Mathew, & Peechattu, 2017) promotes the inclusion of it in the training of pre-service teachers. This was supported by Akbari (2007) suggesting that as pre-service teachers reflect, they will ask questions during their early years which can help developing more informed practice. In relation to that, in this study, the use of the inquiry checklist of reflection in action research helped to develop the pre-service teachers' awareness of their own teaching practices. It enabled them to examine carefully 'what' and 'how' they were teaching. They also found that the checklist allowed them to check on what they have or have not achieved in their lessons by going through the questions in each section.

I was able to analyse what I was doing in my classroom clearly. It made me think of every little detail for each step in my teaching activities.

(FGD2/P2/20171116/14:15/Ryan)

Before this, I only write what I can remember. Sometimes, I missed several things. With the checklist, I can easily recall what I have actually done in the classroom with my learners... and what I managed to do, the learners can do or unable to do. It makes me think more and deeper. There must be reasons for them to happen.

(FGD3/P2/20171117/10:15/Penny)

This was supported by the response from the lecturer-supervisors as they believed the checklist made the pre-service teachers' reflection in the action research reports to go beyond the surface level, with critical accounts of what they encountered in the classroom.

The questions in the checklist made my pre-service teachers to think critically and provided more than descriptive accounts in their reflection in the action research.

(INT1/P1/20171114/09:35/Jane)

I feel that the action research final reports were not merely a report, but a detailed description of every single part of the action research implementation, from the planning to the actual intervention, and towards the reflection of the action itself.

(INT3/P1/20171114/12:10/Fahmi)

Awareness of Other Contributing Factors to the Teaching and Learning Outcomes

Teacher research plays an increasingly significant role in contemporary society as a basis for self-exploration and inquiry (Hong & Lawrence, 2011). Reflection activities in doing the research allow the teachers to identify the

teaching and learning influence on the learners and consequently improve the teachers' practice. Educators who are engaged in reflective practice would normally examine their experiences, inquire about effectiveness, and draw conclusions that influence subsequent learning efforts (Rumohr, 2013). Apart from self-evaluation, they develop better understanding of other aspects such as the learners, teaching sources, and classroom environment through active engagement in their work processes. The use of the questions in the Reflection Checklist in Action Research allows the pre-service teachers to consciously think about the events in the classroom and develop insights into them particularly the effects of their teaching and learning practices. This was relevant to the concept of inquiry approach in education which "focuses on the nature of student works, students' roles and the teacher's own roles" (Anderson, 2002).

The pre-service teachers found that the use of the checklist helped them to be emphatically aware of other influencing factors on the teaching and learning outcomes. The questions in the checklist aided them to be more considerate on the learners' needs, ability, and background when learning the second language. Rather than blaming the learners for unsuccessful learning activities, the pre-service teachers tried to analyse and identify other possible reasons which had not been detected before. This was again supported by the lecturer-supervisors in the interview response.

I can think of other reasons why my lessons did not go well. Why my learners could not do the activity.

(FGD4/P3/20171117/14:25/Kylie)

I used to blame my learners when I could not achieve the lesson outcomes. I felt frustrated, that's why I often blame them. The questions in the checklist helped me to open my mind and to think of other reasons for this.

(FGD4/P3/20171117/14:30/John)

Now I think of other external factors for why my lesson did not go well. My learners may be weak, but I think that I need to change my instruction skills in the classroom to be clear for them to be able to understand and follow.

(FGD1/P2/20171116/10:35/Melly)

What I like about their action research reports now is that they no longer put the blame wholly on their learners. The questions in the checklist allowed them to reflect on other reasons contributing to the issues and problems in their classrooms, such as first language interference. They even had the courage to

consider their own limitations, such as their teaching strategies and teaching resources used in the classroom.

(INT5/P2/20171114/15:42/Zima)

Awareness of Own Values and Beliefs

The most sought-after skill in pre-service teachers when doing action research is the ability to distinguish between what they believed prior to the teaching experiences and what they have learnt after that. From there, they can form their personal theory on teaching, to apply in the future. The reflection activity in action research has been found to help bridge the gap between theory and practice (Feldman, 2002; Luttenberg, Meijer & Oolbakkink-Marchand, 2016; Neilsen, 2014), which can be a challenge to the pre-service teachers (Clarke & Fournillier, 2012; Smith & Sela, 2005). It can be a struggle for the pre-service teachers to relate what they have learnt theoretically during a formal class in the institute with what they acquire throughout their teaching practical experiences. They may find it easy to accept new ideas but it can be difficult for them to get out from the previous beliefs. They can be reluctant in having to change their teaching habits.

In the study, however, the pre-service teachers believed that the questions in the reflection in action research checklist enabled them to discern between their previous knowledge and the acquired knowledge. Through the use of the checklist, they were able to address their preconceived beliefs and built an awareness of emerging personal and professional values. They became more aware of the gaps between the theory and practice in teaching. This had helped them in making decisions in their classroom practices.

I became more aware of the difference between my previous beliefs and with what I learnt when I reflected in my action research project. This was done with the help of the questions in the reflection checklist.

(FGD1/P4/20171116/10:44/Hamzah)

As reflection allows the individual to develop their own personality (Mathew, Mathew & Peechattu, 2017), the pre-service teachers were able to reconceptualise their understandings of their roles as educators. They were able to learn from experiences through reflection as well as construct personal and professional knowledge through inquiry approach using questions in the reflection checklist. It led to the awareness of the changes involving pedagogical

knowledge and how it affected their new beliefs and skills. This brought to the development of new teaching approaches and strategies.

Using the reflection in action research checklist, I could take a critical view of practice... I analysed what I got from my classroom experiences when conducting the action research intervention... relate it to the theories I learnt in my study... from the two action research courses. Then, I used this to look for new alternatives or solutions to the issues I experienced.

(FGD3/P4/20171117/10:35/Cathy)

More Organized and Focused Reflections

Most of the pre-service teachers found that they were able to produce organized reflective writing in their action research reports using the reflection checklist provided. The explicit questions for each section in the action research report allowed them to focus on what they should reflect and provide straight-to-the-point details.

The reflection checklist helped me in organising my thoughts when I reflected my action research. I know what I should write in the final report, especially for every section.

(FGD2/P4/20171116/14:34/Lina)

I was able to structure my reflection according to the needs in the action research reports using the checklist provided. It also helped me to avoid putting unnecessary details, by knowing the focus of each section.

(FGD3/P2/20171117/10:25/William)

The reflection checklist also assisted the pre-service teachers in structuring their thoughts and producing cohesiveness in their reflection in the action research reports. They were able to relate each section with the others leading to a meaningful, critical interpretation of the action research experiences gained. This consequently contributed to a clearer understanding of their classroom practices, as well as their personal and pedagogical values and beliefs. Responses from the lecturer-supervisors showed agreement to this.

The reflection in action research checklist helped the pre-service teachers to understand their teaching. They considered other factors' contribution to the success and failure in lessons. I could see this present in their final reports... umm... in relation to their own beliefs.

(INT1/P4/20171114/09:32/Jane)

The pre-service teachers displayed a well-organized reflection in their action research reports. When I read and analysed the reports, I could easily follow through and understand what they were trying to convey. This was done with the help of the reflection checklist.

(INT2/P5/20171114/10:42/Robert)

Limitations on the Use of the Reflection Checklist

Despite the positive views shown by the pre-service teachers as well as the lecturer-supervisors on the use of the checklist in guiding reflection in action research, one imperative finding from this study was that some of the pre-service teachers' reflections were still superficial and descriptive in nature. The lecturer-supervisors believed that the possible reason could be their English language proficiency. They may be ESL pre-service teachers, but since English was mostly a second language or even a third language for them, hence, only a few of them had the ability to express their real thoughts and feelings using the language.

While the reflection in their action research was more organised and critical, a few of them displayed lack of analytical-descriptive thoughts. I could see their effort to elaborate on their action research intervention during their teaching experiences explicitly. But, it's like ... they were lost of words. So, the descriptions were on the surface, not deep enough. This could be because of their lacking in the English language. Most of them considered English as a language they use only in a formal and academic setting... very seldom used. So, I think that could be the reason.

(INT4/P4/20171114/14:22/Rose)

Doing reflection in action research using the checklist may also limit one's originality and creativity to reflect on one's practice. The pre-service teachers' reflection in their action research final report may confined them to only answer the questions given in the reflection checklist. However, providing a structured guideline can be valuable to help the reflection of novice educators, especially for pre-service teachers (Ostorga, 2006; Wegner, Weber, & Ohlberger, 2014). Pre-service teachers may have limited exposure to classroom experiences as they can only have teaching opportunities during their teaching practical training. With lack of pedagogical exposure, their reflections tend to be superficial and descriptive (El-Dib, 2007; Val Madin, Lee, & Swanto, 2016). Hence, a structured guideline such as the reflection checklist is seen as

necessary in developing their reflection skills. It can be used as a platform before letting them have the full freedom to reflect in the future.

Another area on the use of the reflection checklist which requires attention would be the lecturers' guidance. The lecturers may have their personal way of doing reflection and how to approach reflection in action research.

The lecturer was very helpful and guide me in doing my reflection in action research. However, our views can be... urmm... different from each other. The way he thinks how to use the checklist can be different from how I want to use it.

(FGD2/P4/20171116/14:45/Lina)

Even though initial explanation was given when they were first introduced to the reflection checklist, they may interpret it differently from the pre-service teachers. This would require further exploration on the use of the reflection checklist to identify distinct approach to reflection in action research between the pre-service teachers and the lecturer supervisors.

CONCLUSIONS

The study found that the inquiry approach using a set of questions in the reflection checklist allows ESL pre-service teachers to question their practices, values and beliefs, facilitates their reflective thinking in conducting the action research and in creating a well-developed final report with insightful analysis. With that, they can critically analyse and evaluate their own teaching practice in the future, thus, making positive impacts on their learners' learning.

As the study focused on ESL pre-service teachers studying in one campus from a total of 27 Institutes of Teacher Education in Malaysia, the findings are not to be generalized to the whole pre-service teachers in all the 27 institutes. However, albeit limited in scope and in nature, the findings have some important implications. First, there is an indisputable need for a guideline to aid scaffold the pre-service teachers' reflection in action research. The questions used in the reflection checklist is one potential inquiry approach to help facilitate the pre-service teachers' reflection, as they can examine their practices carefully and persistently to suit their learners' needs (Galini & Kostas, 2014). Secondly, future studies on the use of the inquiry approach in the reflection in action research checklist are recommended for other fields in teacher education such as science and mathematics as well as those in different scopes particularly the in-service teachers and the pre-service teachers in

private higher learning institutions. There is also a need to study the influence of the first or native language on the ESL pre-service teachers' reflective thinking and writing in action research.

REFERENCES

- Abdul Rahman, R., Mohammad Yusof, Y., & Baharun, S. (2012). Improving the teaching of Engineering Mathematics using action research. *Procedia - Social and Behavioral Sciences*, 56, 483-493.
- Akbari, R. (2007). Reflection on reflection: A critical appraisal of reflective practice in L2 teacher education. *System*, 35(2), 192-207.
- Anderson, R.D. (2002). Reforming science teaching: What research says about inquiry. *Journal of Science Teacher Education*, 13(1), 1-12.
- Arrastia, M. C., Rawls, E. S., Brinkerhoff, E. H., & Roehrig, A. D. (2014). The nature of elementary preservice teachers' reflection during an early field experience. *Reflective Practice*, 15(4), 427-444.
- Braun, V. & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Canniford, L. J., & Fox-Young, S. (2015). Learning and assessing competence in reflective practice: Student evaluation of the relative value of aspects of an integrated, interactive reflective practice syllabus. *Collegian*, 22(3), 291-297.
- Clarke, P. A. J. & Fournillier, J. B. (2012). Action research, pedagogy, and activity theory: Tools facilitating two instructors' interpretations of the professional development of four preservice teachers. *Teaching and Teacher Education*, 28(5), 649-660.
- Darling-Hammond, L., & Baratz-Snowden, J. (Eds.). (2005). *A good teacher in every classroom*. San Francisco: Jossey – Bass.
- Duran, M. & Dökme, İ. (2016). The effect of the inquiry-based learning approach on students' critical-thinking skills. *Eurasia Journal of Mathematics, Science & Technology Education*, 12(12), 2887 - 2908.
- El-Dib, M. A. B. (2007). Levels of reflection in action research. An overview and an assessment tool. *Teaching and Teacher Education*, 23(1), 24–35.
- Feldman, A. (2002). Existential approaches to action research. *Educational Action Research*, 10(2), 233 – 252.

- Galini, R. & Kostas, K. (2014). Reflection of pre-service teachers in a tabletop exercise of lesson study during their practicum. *Procedia - Social and Behavioral Sciences*, 152, 868-873.
- Goh, L. & Loh, K. C. (2013). 'Let them fish': Empowering student-teachers for professional development through the project approach. *Educational Action Research*, 21(2), 202-217.
- Hagevik, R., Aydeniz, M. & Rowell, C. G. (2012). Using action research in middle level teacher education to evaluate and deepen reflective practice. *Teaching and Teacher Education*, 28(5), 675-684.
- Hong, C. E., & Lawrence, S. A. (2011). Action research in teacher education: Classroom inquiry, reflection, and data-driven decision making. *Journal of Inquiry & Action in Education*, 4(2), 1-17.
- Hwang, G. J., Chiu, L. Y. & Chen, C. H. (2015). A contextual game-based learning approach to improving students' inquiry-based learning performance in social studies courses. *Computers and Education*, 81, 13-25.
- Institut Pendidikan Guru Malaysia [Institute of Teacher Education Malaysia]. (2013). *Buku Panduan Program Ijazah Sarjana Muda Perguruan dengan Kepujian [Bachelor's Degree Programme with Honors Guide Book]*. Cyberjaya, Malaysia: Institut Pendidikan Guru Malaysia.
- Institut Pendidikan Guru Malaysia [Institute of Teacher Education Malaysia]. (2016). *Buku Panduan Penyelidikan Tindakan [Action Research Guide Book]*. Cyberjaya, Malaysia: Pusat Pembangunan Akademik, Institut Pendidikan Guru Malaysia.
- Jones, J. L., & Jones, K. A. (2013) Teaching reflective practice: Implementation in the teacher-education setting. *The Teacher Educator*, 48(1), 73-85.
- Kori, K., Mäeots, M., & Pedaste, M. (2014). Guided reflection to support quality of reflection and inquiry in web-based learning. *Procedia - Social and Behavioral Sciences*, 112, 242-251.
- Lane, R., McMaster, H., Adnum, J., & Cavanagh, M. (2014). Quality reflective practice in teacher education: A journey towards shared understanding. *Reflective Practice*, 15(4), 481-494.
- Liu, L., & Zhang, Y. (2014). Enhancing teachers' professional development through reflective teaching. *Theory and Practice in Language Studies*, 4(11), 2396 – 2401.

- Luk, J. (2008). Assessing teaching practicum reflections: Distinguishing discourse features of the “high” and “low” grade reports. *System*, 36(4), 624-641.
- Luttenberg, J., Meijer, P., & Oolbakkink-Marchand, H. (2016). Understanding the complexity of teacher reflection in action research. *Educational Action Research*, 25(1), 88-102.
- Madzniyah Md. J. (2012, June). *Amalan refleksi oleh guru dalam pelaksanaan kajian tindakan di sekolah* [Teachers’ reflection practices in the implementation of action research in schools]. Paper presented at the Seminar & Bengkel Kepimpinan Penyelidikan: Melaksanakan, Menulis & Menerbitkan Kajian Tindakan [Research Leadership Seminar & Workshop: Implementing, Writing & Publishing Action Research], Universiti Malaya, Malaysia.
- Mäeots, M., Pedaste, M., & Sarapuu, T. (2011). Interactions between inquiry processes in a web-based learning environment. *Proceedings of the 11th IEEE International Conference on Advanced Learning Technologies*, 331-335.
- Mathew, P., Mathew, P., & Peechattu, P. J. (2017). Reflective practices: A means to teacher development. *Asia Pacific Journal of Contemporary Education and Communication Technology*, 3(1), 126 - 131.
- Mertler, C. A. (2009). *Action research: Teachers as researchers in the classroom* (2nd ed.). Thousand Oaks, California: SAGE Publications.
- Myers, J. (2012). Lesson study as a means for facilitating preservice teacher reflectivity. *International Journal for the Scholarship of Teaching and Learning*, 6(1), 1-21.
- Neilsen, R. (2014). What can we take home? Action research for Malaysian preservice TESOL teachers in Australia. *TESOL in Context*, 24(2), 13-29.
- Ostorga, A. N. (2006). Developing teachers who are reflective practitioners: A complicated process. *Issues in Teacher Education*, 15(2), 5-20.
- Roberts, P. (2016). Reflection: A renewed and practical focus for an existing problem in teacher education. *Australian Journal of Teacher Education*, 41(7), 19-35.
- Rumohr, F. (2013). Reflection and inquiry in stages of learning practice. *Teaching Artist Journal*, 11(4), 224 - 233.
- Ryan, M. & Ryan, M. (2012). Theorising a model for teaching and assessing reflective learning in higher education. *Higher Education Research and Development*, 32(2), 244-257.

- Slobodzian, J. T. (2014). Integrating undergraduate research into teacher training: Supporting the transition from learner to educator. *CUR Quarterly*, 34(3), 43-47.
- Smith, K., & Sela, O. (2005). Action research as a bridge between pre-service teacher education and in-service professional development. *European Journal of Teacher Education*, 28(3), 293-310.
- Sowa, P. A. (2009). Understanding our learners and developing reflective practice: Conducting action research with English language learners. *Teaching and Teacher Education*, 25(8), 1026-1032.
- Spronken-Smith, R., Walker, R., Batchelor, J., O'Steen, B. & Angelo, T. (2012) Evaluating student perceptions of learning processes and intended learning outcomes under inquiry approaches. *Assessment & Evaluation in Higher Education*, 37(1), 57 - 72.
- Ulvik, M. (2014) Student-teachers doing action research in their practicum: Why and how? *Educational Action Research*, 22(4), 518-533.
- Val Madin, C., Lee Kean Wah & Suyansah Swanto. (2016, May-June). *An evaluation of student-teachers' reflective practice in action research: A preliminary study on student-teachers in Institute of Teacher Education Malaysia*. Paper presented at the 25th MELTA International Conference, Ipoh Perak, Malaysia.
- Wegner, C., Weber, P., & Ohlberger, S. (2014). Korthagen's ALACT model: Application and modification in the science project "Kolumbus-Kids". *Themes in Science & Technology Education*, 7(1), 19-34.
- Yaacob, A., Walters, L. M., Ali, R. Md., Abdullah, S. S., & Walters, T. (2014). Reflecting on Malaysian Teacher Trainees' Journals. *Malaysian Journal of Learning and Instruction*, 11(2014), 1-21.
- Zambo, D., & Zambo, R. (2007). Action research in an undergraduate teacher education program: What promises does it hold? *Action in Teacher Education*, 28(4), 62-74.

APPENDICES

Appendix A: Reflection in Action Research Checklist

Reflection in Action Research Checklist

Name: _____

Action Research Topic: _____

General Instructions:

Use these questions to help you reflect on your action research project. Take note that these serves as guidelines only and do not limit your ideas and further reflections.

Section/ Aspect	Questions	(√)
Introduction		
Overview and Research Context	What is the field of my study?	
	Why is it important?	
	Is it significant in my country/professional world? Why?	
Teaching and Learning Experiences	How does it affect my field of work / stakeholders (e.g. learners/schools)?	
	What aspects of teaching and learning did I find interesting/thought-provoking? Why?	
	What did these experiences tell me about my professional practice?	
	What did these experiences tell me about my personal beliefs on classroom pedagogy?	
	Was there any gap between my initial beliefs/values with my teaching experiences?	
	What could I relate to my experiences, i.e. previous research/knowledge/theories?	
Research Focus		
Selection of Research Focus	From my teaching experiences, what specific issue(s) bothered me a lot? Why did the issue(s) arise?	
	Why was(were) it(they) important to be emphasized?	
	Was(Were) the issue(s) relevant to the learners?	

	needs/responses based on my previous teaching experiences? Why?
	Was there any evidence to support the problem stated above?
	What literatures (previous studies) supported the problem/research focus?
Initial Data Collection	What did the findings further tell about the issue/focus I want to study?
	What did I intend to do after analyzing the findings from the initial study?
Action	What action research model do I use? Why do I choose the model?
	What kind of material or system do I use as action/system? Why do I choose it(them)?
	What theory or principle do I base my action/intervention on?
	What previous studies say about my action/intervention?
Research Objectives and Research Questions	
	Are the objectives/questions relevant to my research focus?
	Do they clearly relate to the action/intervention I intend to do?
Research Participants	
	How do I decide my research participants?
	What evidences support my rationale of choosing them as the research participants?
Research Implementation	
	What are the rationales for each of my action procedures?
	How do I make decision on the data collection and data analysis methods?
	How do the data collection methods help to provide answers to my research questions?
	What kind of data checking methods do I use and why do I choose them?

Research Findings

In what way do the findings answer my research questions?

What can I observe from the action/intervention conducted?

What evidences support my findings?

Reflection

What are my interpretations from the findings?

What are the justifications for my interpretations?

How do I relate the findings to any relevant literature?

What comparison can I make between my initial beliefs with my findings?

What do I learn from the action research process?

What further interpretations I can make from my action research?

Further Recommendations

What are the recommendations suggested for future action?

How can it contribute to the future?

Appendix B: Focus Group Discussion Guide (Pre-service teachers)

1. Prior to conducting your action research, how did you see the role of reflection in action research?
2. Describe your understanding now.
3. Briefly describe how you use the reflection checklist in your action research implementation.
4. Briefly describe how you use the reflection checklist in writing your action research report.
5. How did the use of the reflection in action research checklist affect or shape your action research experiences?
6. In what ways did the use of the reflection in action research checklist affect or shape your personal or pedagogical beliefs and values?
7. What recommendations would you suggest on the use of the reflection in action research checklist in the future?

Appendix C: Interview Questions (Lecturer-supervisors)

1. Tell me your involvement in action research.
2. How were your experiences in supervising the ESL pre-service teachers' action research?
3. What do you think of the use of the reflection in action research checklist by your pre-service teachers?
4. In what way has the reflection in action research checklist influence your pre-service teachers' reflection in action research?
5. What recommendations would you suggest on the use of the reflection in action research checklist in the future?