

Action Research and Primary School Teachers in Malaysia: A Teacher Professional Development Programme

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Abstract – Since the development of the notion of teacher as an action researcher, action research has been proven to be an essential tool for teachers in improving their classroom practices. However, the use of action research among primary school teachers in Kuching, Malaysia is still uncommon. In this paper we propose that action research could be used in implementing school-based pedagogy interventions. We showed how teachers responded to a cyclical teacher professional development programme that utilised an easy-to-use template that guided teachers in writing their action research. Analysis revealed two core themes which were the use of action research posters as intervention plans and respondents' voices in the implementation of action research in the teacher professional development programme. Responses indicated that primary school action researchers benefitted from an on-going writing input and small group support in the process of producing action research. Furthermore, the programme enabled action researchers to be more aware of, and responsive to, the various learning issues faced in the classroom through the reflective process of action research. To cultivate the culture of action research in schools successfully, more attention should be given in the careful planning of teacher professional development programmes in a more supportive and continuous manner. The study's results highlighted the benefits of action research but also cautioned researchers to meticulously design teacher training programmes to effectively integrate action research as a powerful tool for classroom interventions.

Keywords – Teacher professional development, Action research, Primary school education, In-service training

I. INTRODUCTION

The academic sector is currently still suffering from the after effects of COVID-19 pandemic in terms of students' learning loss due to school closures. Consequently, teachers have been pushed to face unprecedented challenges in mitigating learning loss that have left a huge learning gap in many students. The uncertainty and vulnerability demanded teachers to reimagine teaching, resulting in increased teaching reflections and interventions for a multitude of teaching and learning issues stemming to better prepare students. During this period, empowering teachers to revolutionise their methods becomes paramount by equipping them with essential tools, support, and the freedom to innovate. Numerous educators sought tools aiding in planning and executing interventions, among which action research stood out as particularly beneficial.

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Action research is increasingly becoming an established approach of reflection and inquiry in the field of education, contributing in the professional development of teachers (Kamarudin & Noor, 2023). Academics concur that action research is a crucial instrument for educators to enhance their practices and its many benefits include enriching teacher professional development by shifting from a more traditional lecturing pedagogy to a more student-centred activities (Acharya et al., 2022, Hine, 2013), increment in students' understanding resulting from the teachers' action research projects (Phoon et al., 2020) and improvement in students' learning motivation (Azainil et al., 2019). Action research serves as a potent and successful technique that enhances teaching practices because it provides action researchers a form of collective self-reflective enquiry to understand as well as to rationalise the teaching situations in which the practices are being carried out (Kemmis & McTaggart, 1988). Hence, through a series of observations and reflections, teachers construct and enhance their understanding of their current teaching practices by suggesting ways for improvement with the main aim of optimising student learning. Apart from inculcating reflections for improved practices, schools could impart the research culture among in-service teachers which enabled to a certain extent the transformation of education in the current dynamic and ever-changing 21st century teaching and learning.

II. PROBLEM STATEMENT

Despite the many benefits that action research brings to instructional practices, implementation of action research in schools receives many challenges. Some of the main challenges put forth by scholars include teachers' heavy workloads, time constraints, and a lack of in-depth understanding and skills related to its approach (Norasmah & Chia, 2016). The lack of teachers' knowledge, skills, and scaffolding in action research have further contributed to teachers' low self-confidence in the application of action research to improve their practice. In the Malaysian context, Shanmugam and Lee (2016) shed some light on the challenges faced by teachers, which include the lack of research culture in schools and lack of support from school administration. Morales et al. (2016) revealed that teachers encountered challenges in carrying out action research because they lacked proficiency in statistics, data organisation, conducting literature review and report writing. To achieve the intended impact of action research as an accountable tool for teacher professional development, these challenges have to be overcome.

Numerous recent research studies have examined the utilisation of action research in teacher professional development across various global regions (Gujarati, 2018; Morales et al., 2016; Sakshaug et al., 2008; Shanks, 2016). Although action research is a structured and reflective approach aimed at enhancing classroom practices, there is limited literature demonstrating how its integration into teacher professional development programmes is made possible despite the many challenges. More specifically, insufficient research exists to explore strategies for addressing the obstacles to establishing a culture of action research within the in-service teaching community. One of the few studies include investigation conducted by Guerra and Figueroa (2017), in which teachers successfully develop interventions utilising the action research framework. Action research has the potential to cultivate the investigative and transformative capabilities of teachers, serving as a driving force for change that is intimately connected to their experiences and the issues related to teaching and learning. This potential could only be fulfilled if schools and educational institutions provide sustainable training and resources for teachers, foster a culture of research and continuous professional development, and create a supportive environment that values the contributions of action research to improving teaching and student outcomes.

Literature Review

Educational Action Research

Action research is a cyclic process of collaborative self-examination involving observation, reflection, planning and action taking with the aim of enhancing teaching and learning practices (Hine, 2013; Kemmis & McTaggart, 1988). In other words, through educational action research, teachers have the opportunity to address identified challenges and enhance their professional performance based on self-determined objectives. The core of action research revolves around taking action, with the gathered data serving as feedback that informs adjustments and modifications to planned activities.

In the context of teacher professional development, action research is seen as an integral component of educators' ongoing professional growth, primarily because action research supports their in-service learning in adapting to shifts in their roles, teaching methods, and the accountability requirements essential for addressing diverse student needs in this evolving educational landscape. Action research shares similarities with effective teacher professional development, as both give opportunities to reflect on teaching practices via subject-specific and practice-based support in a continuous and sustainable manner (Main & Pendergast, 2015; Riel, 2016). Reflective practices are the essential foundation of action research, as educators must assess their existing methods and scrutinise the actions, they undertake both during and after interventions when conducting action research.

Action Research Model

There are various action research models that have been

developed by researchers, including the Action Research Model developed by Kemmis and McTaggart (1988). This model suggests four action research steps based on a cycle which include observation, reflection, planning and action.

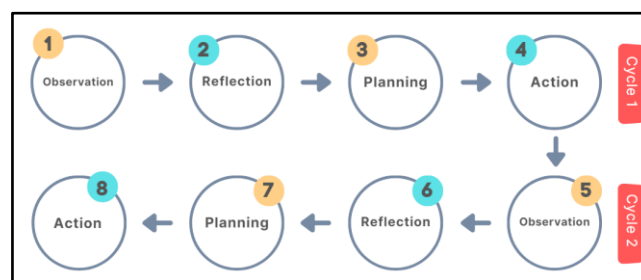


Figure 1. Action Research Model
Adapted From Kemmis & McTaggart (1988)

In the observation stage, data is collected based on the observations on the teaching and learning issues that arise (Kemmis & McTaggart, 1988). This stage involves the process of identification, evaluation and formulation of the issues within the context of everyday teaching.

The reflective moment centres on an extended period of reflection, which frequently involves discussions about the recognized problems and their underlying reasons (Maxwell, 2003). Self-reflection to identify personal strengths and weaknesses in the context of teaching practice or student learning is conducted (Altrichter et al., 2002). Through reflection, action researchers would conceptualise and generalise problems, procedures and outcomes to explore whether the concepts are accurate in different scenarios by seeking supporting or contradicting evidence.

During the planning stage, action researchers would devise strategies that could lead to enhancements through specific actions such as through an intervention plan, based on the identified teaching and learning issues (Maxwell, 2003). According to Zuber-Skerritt (2001), action researchers would take ownership of the issue, assuming responsibility and being held accountable for its resolution through a cyclical process of strategic planning. During this phase, educators would strategize their actions to address and resolve the specific problem at hand.

The action phase would involve the execution of the intervention plan devised to solve teaching and learning issues. Kemmis et al. (2019) highlighted the significance of action researchers, at this point, putting their plans into action regarding the process and outcomes of the change resulting from the observation, reflection, and planning process. Moving forward, action researchers would be making decisions for the second cycle of action research, namely, observing the effectiveness of the intervention, reflecting on the solution to the issue, coming up with a revised plan, followed by action, and so on, as shown in the spiral of Action Research Model (Figure 1).

Action Research in Malaysia

Since 2001, the concept of carrying out action research has been consistently upheld through pre-service programmes at educational institutions, as well as through in-service courses and workshops organised by the

Education Planning and Research Department, Malaysian Ministry of Education (Ministry of Education Malaysia, 2008). In pre-service teacher training programmes particularly, Amin et al. (2019) examined the integration of action research into teacher education. The results revealed that the incorporation of action research faced obstacles due to the lack of prior exposure how to conduct action research during the early phases of teacher training and a teacher training curriculum that lacked clear objectives and structure that focus on action research. The research suggested that action research workshops and training sessions should be introduced earlier in the training programme, with a greater emphasis on hands-on learning experiences for the pre-service teachers.

For in-service teachers, the promotion of an action research culture has been nurtured across all educational levels, including primary, secondary, and higher education. One of the ways to inculcate the action research school culture is through the National Education Research Conference in Malaysia, which is held annually since 1993, as it serves as a dedicated platform for disseminating the findings of action research among teachers (Ministry of Education Malaysia, 2008). Through this conference, in-service teachers are provided with the opportunity to present their action research reports and share their insights with other educators who are involved in the network of action research established in each State Education Department.

Another way that the culture of action research in schools could be developed is through the integration of action research into the teachers' routines to enhance their professionalism in implementing the curriculum. An instance of this can be seen in the research conducted by Wahid et al. (2011), where they concentrated on the limited enthusiasm of students in relation to science learning. The action research conducted offered alternative methods of teaching Science, specifically on how environment awareness and knowledge can be taught to make students enjoy their learning and be informed about environmental knowledge. The teachers involved in the action research not only have improved their teaching strategies to make Science learning fun for the students but have also become increasingly conscious of the importance of preserving the environment. Due to certain efforts aimed at enticing teachers to participate in action research, there is a paradigm shift that saw the inclusion of research culture in the Malaysian teachers' profession, which to a certain extent, has transformed teacher professional development.

Further review on action research in the context of Malaysian teachers indicated that many perceived action researches to be challenging and burdensome. Shanmugam and Lee (2016) revealed that the primary obstacle to introducing action research in schools is the lack of a research-oriented culture. Teachers stated that conducting research was uncommon, making it a challenge to familiarise them with the practice of action research. The study further identified the lack of support from schools as a challenge for teachers to be action researchers. Teachers expressed the need for more tangible support from the schools, rather than mere encouragement, to enable them to become action researchers. Teachers believed that a more effective way to motivate them to engage in action research

would be to decrease their workload. Accordingly, fostering a research culture was regarded as a vital and timely move, particularly in advancing and maintaining teachers' professional growth.

Characteristics of Effective Teacher Professional Development

Many scholars have investigated how to break the habit of ineffective professional development for teachers aiming to maximise its impact on both teacher performance and student results. Studies indicate that professional development tends to be more effective when it is consistently maintained over an extended period (Cordingley et al., 2015; Darling-Hammond, 2017; Dunst et al., 2015). Further investigation reveals that organising professional development activities in a cyclical fashion is essential, as it allows for the re-examination and reinforcement of acquired skills and content. The reason for this is typically based on the notion that teachers need time to absorb and integrate new knowledge. In contrast, one-off, one-day sessions are frequently criticised for their lack of effectiveness.

Second, it is suggested that teacher professional development is more impactful when the training promotes collaboration among educators, enabling them to exchange ideas and collaborate (Al-Mahdi, 2019). More commonly, the demand for collaboration is expressed as the necessity to engage with several colleagues or a community of practice, so as to allow teachers to demonstrate their ideas with their peers (de Jong et al., 2019). This underlying principle is encapsulated by sociocultural theory, which posits that knowledge and learning emerge through social interactions and engagement with other individuals, objects, and events (Vygotsky & Cole, 1978). On the contrary, the direct transmission of information from an instructor to an individual participant is frequently criticised as being notably inefficient.

Another critical feature of teacher professional development is content-focused (Abakah, 2023). This is frequently contrasted with professional development that solely focuses on teaching techniques in a general sense, separate from the specific subject matter they are meant to convey. Educators would experience greater advantages if they had the chance to practise within on-the-job settings that are directly related to their specific subject matter. This may encompass activities such as designing lesson plans, crafting unit plans, analysing student work samples, observing fellow teachers, and studying video or written examples relevant to the subjects they teach.

Frequently, the effectiveness of professional development diminishes when teachers show limited enthusiasm for the perceived utility of in-service training. Research suggests that professional development is more successful when teachers have a higher buy-in and can relate to and receive active support throughout their participation (Cordingley et al., 2015). The argument is that voluntary professional development is more effective than mandatory professional development. Nevertheless, some scholars emphasise a more nuanced perspective, contending that even obligatory professional development can garner strong

support if its advantages are clearly communicated to participants with strong support from the school leaders, enabling both teachers and the schools to recognize the value of their involvement (Timperley et al., 2007).

Professional development literature recommends enlisting external experts to deliver training and provide input (Darling-Hammond, 2017). This entails receiving input from individuals who are not part of the same educational institution. The rationale for this approach typically rests on the better buy-in of ideas when teachers receive new perspectives, rather than relying on the already familiar expertise available within the schools (Sims & Fletcher-Wood, 2018).

Teacher professional development often becomes ineffective when knowledge is imparted through passive lectures in which teachers receive new information passively but do not apply it. To be more effective, teachers should be provided with opportunities to use, practise or apply what has been learned (Cordingley et al., 2015). It is rationalised that this helps teachers apply what they have learned in real classroom situations. Consistent with the context explored in this section, this article centres on the implementation of action research within a teacher professional development programme for three elementary school teachers. It delves into the process they underwent, which ultimately led to improvements in their English language teaching and learning.

III. METHOD

The goal of this study was to bridge the divide between the ideal concept and the practical implementation of action research. It accomplishes this by showcasing how a teacher professional development programme was structured to introduce the practice of action research to three primary school teachers in Malaysia. The objective was to understand the implementation of action research within a teacher professional development programme. This study employed a qualitative approach of survey design using open ended questions of three teachers regarding the implementation of the programme (Creswell, 2012), on top of analysing documents such as action research reports implemented in the programme.

Teacher Professional Development Program: School-Level Action Research Implementation

In this research, the researcher assumed the position of the trainer within the professional development programme. Therefore, this implies that the researcher holds a dual role, fulfilling both the responsibilities of conducting the research and facilitating the training sessions (Creswell, 2013). The researcher is a seasoned instructional coach (School Improvement Specialist Coaches Plus, SISC+) working in the Kuching District Education Office with nine years of experience. One of the many responsibilities of a SISC+ includes providing coaching, guidance, and training to teachers and school administrators in implementing effective teaching strategies and educational practices (Ministry of Education Malaysia, 2017). The trainer is also

responsible for the training of teachers in the application of action research.

The design of the teacher professional development programme in this research drew from the literature on effective teacher professional development, incorporating these vital elements: sustained duration, active and collaborative learning, content focus, teacher buy-in, leveraging external expertise and ample active learning opportunities. This was essential to guarantee the successful integration of action research into the school's culture.

The programme's primary goal was to encourage teachers to use action research as the main approach to reflect on teaching and learning issues and devise strategies for improvement. The programme was rolled out in five series of training sessions spanning a 14-week period, with teachers participating in one session in 2 to 3 weeks (Figure 2). Prior to the implementation of the programme, consensus was gathered from the school head and a detailed introduction to the structure of the teacher professional development programme and action research.

Figure 2. Teacher Professional Development Programme using Action Research

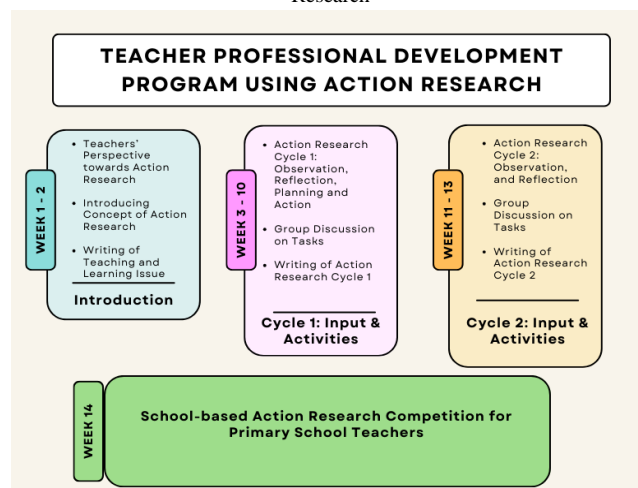


TABLE I: RESPONDENTS' DEMOGRAPHY

		Age (Years)			
		25-35	36-46	>46	Total
Gender	Male	0	0	0	0
	Female	0	2	1	3
Teaching Experience (Years)	<10	0	0	0	0
	>10	0	2	1	3
Academic Qualification	Degree	0	2	1	3
	Master's	0	0	0	0
Subject Taught	Bahasa Melayu	0	1	1	2
	English	0	1	0	1
Designation	Teacher	0	1	1	2
	Head of Panel	0	1	0	1

Data Analysis

The feedback from the respondents about their prior knowledge and skills in conducting action research, as well as their feedback on the teacher professional development programme, underwent analysis through content analysis. The action research posters that the respondents produced after attending the programme were also used to provide

qualitative data for this study. The posters gave an in-depth insight (Edwards & I'Anson, 2020) into how the respondents applied action research to address teaching and learning issues.

IV. FINDINGS

Before participating in the programme, the respondents provided their input on their engagement with and frequency of conducting action research. The majority of respondents lacked prior experience in action research, with only one of them having engaged in it once a year (Table II).

TABLE II: EXPERIENCE AND FREQUENCY IN CONDUCTING ACTION RESEARCH

		No. of Respondents
Experience in Conducting Action Research	Yes	1
	No	2
Frequency in Conducting Action Research	Once a Year	1
	None	2

Use of Action Research Posters as Intervention Plans

To understand how action research was used in the teacher professional development programme, action research posters were analysed. The results showed that all respondents were able to conduct action research that represented the interventions supported by their reflections, employing the action research guideline developed by the programme. The action research was conducted by the respondents in a Chinese primary school that they taught. However, only 2 out of 3 respondents were able to complete the implementation of their action research in 2 cycles, whereas 1 out of 3 of the respondents managed to conduct observation, reflection and planning in cycle 1 of the action research.

All respondents attended the teacher professional development programme in action research. In the training, teachers participated in the 1.5 hours session in 5 series, with the total training duration to be 7.5 hours in total. The respondents were able to complete the given tasks that consisted of identification of teaching and learning issues, observations, reflections, planning, taking action, re-observation and re-reflection stages. The respondents were required to develop their action research as they attended the training. At the end of the training, 2 out of 3 respondents submitted a complete action research report using the action research template designed for the teacher professional development programme (Figure 3 & Figure 4).

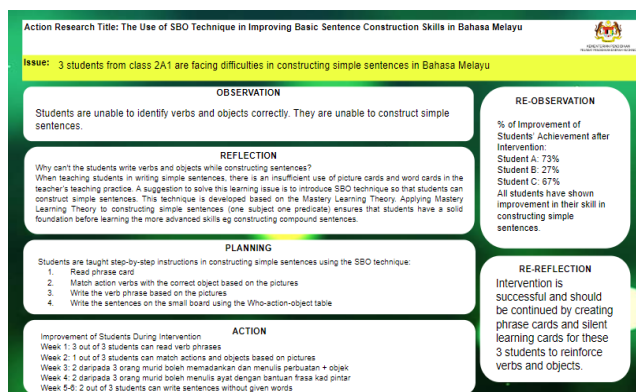


Figure 3. Action Research Poster: The Use of SBO Technique in Improving Basic Sentence Construction Skills in Bahasa Melayu

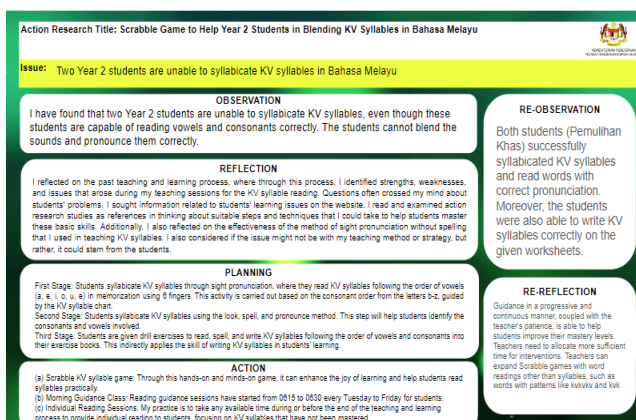


Figure 4. Action Research Poster: Scrabble Game to Help Year 2 Students in Blending KV Syllables in Bahasa Melayu

The action research conducted by 3 respondents focused on improving students' performance in English Language and Bahasa Melayu. The skills involved were reading and writing skills. All respondents successfully recognized the challenges in teaching and learning experienced by a specific group of students in their respective classes. The respondents effectively utilised the training to conduct their action research.

Based on the identified issues and challenges faced by the respondents in their classrooms, observations were made with the support of document analysis, picture and video evidence. The respondents collected students' work, results from oral and written examinations and audio recordings that supported their observations conducted on the teaching and learning issues. Observations were informal and unstructured with the participants jotting down notes based on what they observed.

Respondents engaged in reflections based on the observations made upon the teaching and learning issues. Respondents conducted self-inquiries of teachers' teaching practices and student learning to pinpoint the underlying causes of the challenges encountered in the classrooms. One of the respondents reflected:

Why can't the students write verbs and objects while constructing sentences? When teaching students in writing simple sentences, there is insufficient use of picture cards and word cards in the teacher's teaching practice. A suggestion to solve this learning issue is to

introduce SBO technique so that students can construct simple sentences.

From the respondents' self-inquiries, the respondents determined the appropriate intervention to address the teaching and learning challenges.

In the planning phase, participants formulated intervention strategies with the goal of resolving the identified issues. These plans were crafted through the reflections of the respondents and were underpinned by theories related to student learning. For example, one of the respondents applied the Mastery Learning Theory, emphasising the mastery of verbs and predicates prior to students acquiring the ability to construct simple and compound sentences.

The study's results showed that 2 out of 3 participants successfully implemented the intervention plan through their action research. According to the respondents' accounts, it was evident that they needed to utilise any available time before and after their classes to deliver individual interventions to the specified students for their action research. Additionally, one of the participants did not finalise the action research poster due to the non-execution of the intervention plan.

According to the respondents' action research posters, it was observed that all students engaged in the action research exhibited progress in either constructing simple sentences or reading words with KV syllables in Bahasa Melayu. The respondents demonstrated the capacity to engage in reflective practices (in re-reflection stage), drawing insights from their action research findings, and provided pertinent recommendations to facilitate student improvement. The participants recommended that teachers allocate more adequate time for interventions.

Respondents' Voices in the Implementation of Action Research in Teacher Professional Development Programme

Based on the respondents' feedback on the action research process, analysis was conducted to understand respondents' perception of the teacher professional development programme. All respondents agreed that action research could improve teaching and learning through reflection on teachers' classroom practices. They responded further that they used action research as a tool that allows them to delve deeply into their teaching practices, investigate specific issues or challenges within their classrooms, and subsequently make informed improvements.

Through the teacher professional development programme, the respondents noted an enhancement in their grasp of the action research concept and its practical implementation. Before attending the programme, respondents reported that moderate level of understanding and increment in the level of understanding was observed after the programme. All respondents achieved at least a high level of understanding in action research.

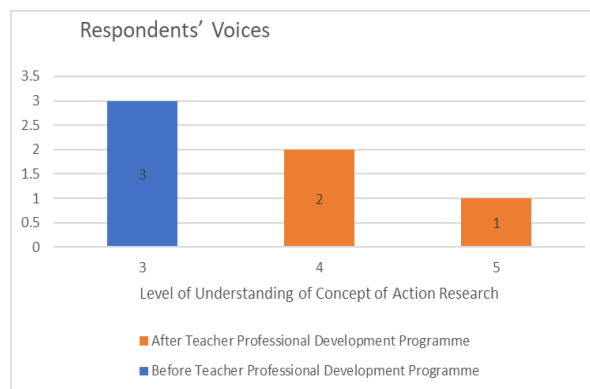


Figure 5. Respondents' Level of Understanding of Concept of Action Research

Regarding the respondents' proficiency in writing action research, all participants reported a shift from a moderate level of skill to a high level of proficiency.

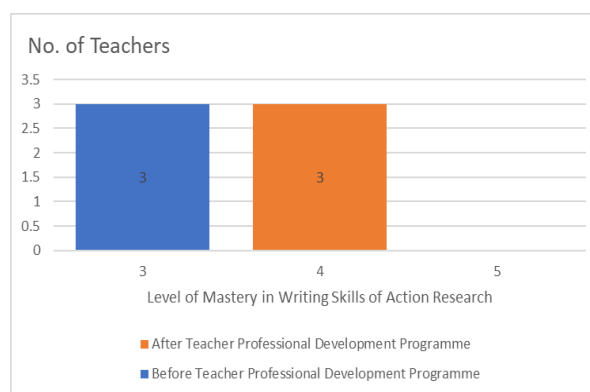


Figure 6. Respondents' Level of Mastery in Writing Skills of Action Research

One respondent acknowledged the programme's positive influence, noting an increased readiness for implementing action research afterward. However, two respondents still found action research to be burdensome.

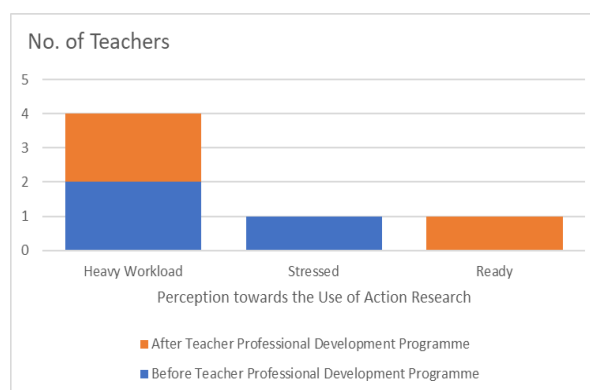


Figure 7. Respondents' Perception towards the Use of Action Research

The respondents identified insufficient time as a primary factor leading to limited engagement in action research. Open-ended questions further revealed that the respondents felt burdened because of unrealistic work expectations in schools. Respondents shared that their heavy workloads had caused them to perceive action research as an additional task

rather than an integral part of their professional development. When being asked for comments regarding the programme, one of the respondents elaborated:

It is a good programme except that we are stressed with school work, activities and other commitments.

Respondents were further asked about the reasons for their success in producing action research through the teacher professional development programme. Two respondents highlighted the programme's emphasis on active learning, user-friendly action research templates, and continuous guidance from the programme's instructor as key reasons for their achievements. Two respondents supported the notion that working together with fellow teachers throughout the training sessions proved beneficial in enabling them to develop their action research. Figure 8 summarised the features of effective teacher professional development and the design of the action research teacher professional development programme for this study.

Features of Effective Teacher Professional Development	Design of Action Research Teacher Professional Development Programme
Active Learning	Respondents reflected own teaching to conduct action research based on their teaching and learning issues.
Content-focused	Easy-to-use action research templates were used instead of reporting action research in full article format.
Maintained Over an Extended Period	Programme was rolled out in five series of training sessions spanning a 14-week period, with teachers participating in one session in 2 to 3 weeks.
Enlisting External Expert	Programme trainer was an external expert of action research and instructional coaching invited from the District Education Office.
Collective Participation	Respondents worked together with fellow teachers throughout the training sessions to complete the action research templates.

Figure 8. Summary of the Features of Effective Teacher Professional Development and the Design of the Action Research Teacher Professional Development Programme

The programme's structure played a role in encouraging the respondents to embrace action research. Regarding changes related to respondents, the trainer noticed a process of empowerment where they effectively utilised action research to assist in planning interventions by reflecting on teaching and learning methods and trying new methods of strategies developed through the action research process. After the programme, the trainer mentioned some of the respondents had presented action research in a school-level action research competition and participated in district-level colloquium to share their experience with other teachers. However, there was still a lack of evidence in terms of the respondents becoming autonomous in the use of action research as an independent practice in solving day-to-day teaching and learning issues.

V. DISCUSSION

This study demonstrates the relevance of action research as a form of professional development for primary school teachers. As observed in the use of action research posters in planning interventions for reading and writing skills in the subject of English and Bahasa Melayu, respondents became more reflective about their teaching practice and students' learning. These findings align with Guerra and Figueroa's

(2017) research, which revealed that action research empowers teachers to critically engage in analysing their teaching practices. To elaborate, respondents in the current research exhibited practical steps they implemented as better teaching methods in their classes. The improved methods were guided by distinct approaches, like the Mastery Learning theory, showcasing their refined teaching strategies. This resonated with studies by Coban and Coştu (2021) and Uştu et al. (2022) where researchers discovered that implemented action plans provided a pathway for designing interventions grounded in established learning theories and strategies. Consequently, this study contributes to the growing collection of literature emphasising how action research enhances teaching practices and student learning.

Respondents in this study had successfully completed the process of action research. The respondents utilised the Kemmis and McTaggart (1988)'s action research framework, following a cycle of four steps: observing, reflecting, planning, and taking action to improve their teaching through reflection on their practices. Likewise, academics noted that action research was effectively utilised to prompt teacher interventions catalysed by their reflections. Sakshaug et al. (2008) discovered that via action research, teachers experienced professional growth and adopted new strategies as a result of their reflections. Through what Sakshaug et al. (2008) termed as negotiated dialogue, teachers dedicated time to reflect and analyse their teaching methods and student learning, aiding them in discerning effective and ineffective practices.

This study revealed additional benefits of action research that extend beyond just pedagogical implications. It was observed that the participants felt empowered to both plan for and embrace changes in their teaching methods. According to Sakshaug et al. (2008), through action research, teachers display greater openness to new strategies and adaptations when they actively reflect on their teaching methods. While teachers initially gained knowledge and skills in using action research as a tool for reflections and analysis of their practices, they were observed to implement changes that originated from within themselves.

Introducing action research successfully to the respondents would not have been possible without a meticulously planned teacher professional development programme that aligned with theories supporting effective teacher professional development. The current study revealed that the design features and methods in the professional development module has positively influenced teachers' competence development through the use of action research. One of the features contributing to the success of this training programme would be the duration of the training which was continuous and sustained for a period of 14 weeks. Korsager et al. (2022) emphasised the significance of ongoing professional growth, as demonstrated in their research where teachers engaged in a five-week module designed for collaborative work among peers, rather than a singular training event. However, the current study not only used a single feature of effective teacher professional development. The combination of features included active teacher learning, content-focused, continuous training, enlisting external experts in action

research and collective participation. An equally notable discovery from Korsager et al. (2022) demonstrated that while incorporating effective teacher professional development elements into the design of training programmes could enhance teachers' learning, these components alone were insufficient to guarantee the achievement of the programmes' objectives, such as the execution of action research by teachers. In addition, in Osborne et al. (2019)'s study, it was observed that the programme's characteristics did not demonstrate a substantial impact on the actual improvement of teacher practice. Avalos (2011) further revealed that sustaining learning over time has little impact on the effectiveness of a teacher professional development programme.

The main concern is in identifying the attributes of methods for planning interventions, specifically delving into the utilisation of action research. This includes determining the most effective way for teachers to learn to the extent that they could seamlessly implement action research following their participation in the programme. The current research therefore has provided evidence that a combination of the features might have contributed to the success of the teacher professional development programme which focused on developing teachers to enact action research and translate interventions from the action research into the context of their own practice.

An essential aspect to take into account is the time available for implementing a teacher professional development programme that integrates action research. One respondent in this research disclosed one main difficulty encountered while carrying out action research was in putting the intervention into practice, leading to an inability to proceed with the action phase. Consequently, both the re-observation and re-reflection stages could not be executed. Similarly in the teacher professional development literature, teachers often feel burdened by action research due to time constraints (Mitton-Kükner, 2016; Park & So, 2014). Teachers reported to have demanding schedules with teaching, grading, administrative tasks, and extracurricular responsibilities. Adding action research on top of these duties can create a sense of overload. The present research illuminated the concept mentioned by Shanmugam and Lee (2016) regarding a more concrete form of support from schools in teacher professional development which is granting teachers sufficient and additional time to participate in both training and action research.

VI. CONCLUSION

Engaging in action research might pose complexity or difficulty, particularly when teachers lack prior experience or training in the skills and principles required for conducting it. In the present research, teachers not only achieved improvement in understanding the concepts and practical application of action research but also demonstrated increased preparedness for carrying out action research in the future to a certain extent. On top of that, their engagement in this learning journey significantly improved their ability to observe, reflect, plan and execute interventions that best fit their students' needs. This learning experience empowered them to foster open discussions of

ideas, question both their and others' perspectives, cultivate a collaborative learning environment, and adopt an investigative approach to teaching.

The study's results highlighted the benefits of action research but also cautioned researchers to meticulously design teacher training programmes. This is crucial for effectively integrating action research as a powerful tool for classroom interventions. In this respect, some tensions emerged from the analysis and information gathering in this report. Time constraints due to heavy workloads caused teachers to perceive action research as an additional task rather than an integral part of their professional development. Insufficient guidance, mentoring, or institutional support in undertaking action research can make the process daunting and burdensome. Some teachers might resist change or view action research as an imposition rather than an opportunity for growth. Addressing these concerns by providing adequate training, resources, time allocation, and institutional support could alleviate the burden teachers feel and encourage their active engagement in action research.

In conclusion, one suggestion would be to expand the scope of research by considering other classroom situations such as in secondary school settings. While this study effectively delves into various facets of the specific situation under review, it is important to note its limitation: due to its qualitative research nature, the gathered data may not be universally applicable to a broader population. Given the understanding that individuals often possess unique viewpoints toward events, resulting in diverse interpretations and solutions for the same issue, it would be beneficial to conduct future studies comparing various cases and perspectives on the problems addressed in this research.

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