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### THE ROLE OF CRITICAL FRIENDS IN ACTION RESEARCH: A FRAMEWORK FOR DESIGN AND IMPLEMENTATION

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#### ABSTRACT

The primary purpose of action research carried out by teachers is to improve their own educational and pedagogical practices in a specific context. However, teachers need to develop a more critical stance on their practice to interrogate and validate their action research systematically. Literature suggests that action research can be strengthened through the involvement of critical friends who can ask provocative questions, provide data to be examined through another lens, and offer a critique of a person's work as a friend. This narrative review paper seeks to emphasize the role of critical friends and propose a critical friend framework that can be integrated into

action research studies. It extensively reviews the role of critical friends in action research with illustrations from previous studies. It offers a critical friend's protocol according to the action research process of self-reflective cycles, namely reconnaissance, planning, action and observation, and reflection. It is therefore suggested that teachers should consider the incorporation of critical friends into their action research studies.

**Keywords** - Critical friends, collaboration, action research, teacher research, critical friends' protocol.

## TEACHERS' ACTION RESEARCH

The notion of the teacher-researcher was coined by Stenhouse (1975) through his influential publication, *"An Introduction to Curriculum Research and Development."* In this work, Stenhouse initiated a movement to encourage teachers to research the process of curriculum development. Teacher research is a form of self-study whereby teachers research or inquire into their own practices (Richardson, 2001). Stenhouse's (1975) notion of the teacher-researcher is part of the action research movement that suggests that teachers are in the best position to inquire into their own practices to solve problems in the contexts in which they teach. The process of teachers conducting their own research, often in their own classrooms, provides many benefits for them, their pupils, and the school environment (Richardson, 2001). In recent years, teacher research is seen as a means of professional development. By deploying the tools of classroom-based action research, teachers might reflect further on their own practice to establish greater professional autonomy (Fordham, 2016).

### Professional Development and Teacher Learning

Teachers' professional development is more effective if they participate in communities of practice, thus improving their knowledge and practice (Cochran-Smith & Lytle, 1999). This idea of teachers as a community of learners, inquirers, and researchers has been identified as a critical agenda in professional development (Richardson & Placier, 2001). Many variants of teachers' professional development as a community of learners exist, such as online learning communities

(Riel, 1998), communities of practice (Stein et al., 1999), communities of learners (Wineburg & Grossman, 1998), teacher networks (Lieberman, 2000), professional learning communities (Hargreaves, 2003), knowledge-building communities (Scardamalia & Bereiter, 2003), teachers as communities of learners (Shulman & Sherin, 2004), and action research communities (Mertler, 2017). In particular, action research, all of these highlights the need for teachers to work as members of a community, focusing on reflection, collaboration, and inquiry, as they work to transform their classroom practices (Chan & Fai Pang, 2006).

In action research conducted by teachers in the form of self-study research, teachers are responsible for their learning in a process that seeks to understand educational practices (Zeichner & Noffke, 2001). Contemporary learning theories have shown a major shift from an individual to a social view of learning (Paavola et al., 2004). Learning is no longer considered a solitary activity; rather, it is situated in real-world contexts, in which participants engage in meaningful activities (Lave & Wenger, 1991), is scaffolded through a cognitive apprenticeship (Collins et al., 1989), and fostered through learning communities (Bielaczyc & Collins, 1999). These new paradigms argue that learning is fundamentally a social activity. Teachers, similar to other learners, do not learn individually. Instead, they collaborate and work with others in the process of co-constructing their knowledge (Putnam & Borko, 2000). In action research, Waters-Adams (1994) emphasizes the key role that intersubjectivity discourse plays in establishing the validity of understanding a teacher's practices and reflecting on how they might be improved.

The development of innovative teaching and learning theories, from knowledge transmission to social constructivism (Palincsar, 1998), is guiding current reform efforts. Indeed, learning involves more than the memorisation or reproduction of information. It is an active process of locating information, evaluating its usefulness, solving problems, and constructing new meanings in social settings (Eyler, 2018). The aims of teachers' professional development now include developing teachers who can contribute to pupils' self-development, collaborative skills, life-long learning, and cosmopolitan perspectives (Petrie & McGee, 2012). When education was about transmitting bits of information to pupils, teachers could be expected to teach

from a set of curriculums and syllabuses mandated by the Ministry of Education. Conceptualising education as knowledge construction, rather than teaching as knowledge transmission, places teachers in different roles—teachers need to engage in organising learning environments that are sensitive to modern-day issues and linguistic and socio-economic contexts, as well as to the diverse characteristics of learners (Chan & Brown, 2016).

### **Collaboration and Action Research**

Action research and collaboration are closely interlinked, since the action research process is considered successful when it involves a collaborative structure and actively supports the teacher-researcher's development (Waters-Adams, 1994). Elliott (1991) emphasises the many definitions of action research regarding its methodology and design. As he explains, these definitions range from “an inquiry into how to control pupil learning to produce predefined curriculum objectives or targets” (Elliott, 1991, p. 52), to a reflexive analysis that emphasises all practical aspects where collaboration is considered to play an important role in the effort to build knowledge. Elliot's description shows that there are many ways of implementing and designing action research. However, the key to understanding the complex relationship between collaboration and action research is the nature of critical reflection and its manifestation in reflective action (Waters-Adams, 1994).

A range of literature outlines the need for teachers who conduct action research to establish collaborative conversations that dig deep, challenge assumptions, and enrich their understanding of how to improve teaching to enhance pupil achievement (Blake & Gibson, 2020; Cunningham, 2011; Feldman, 1999; Hendricks, 2017; Jacobs et al., 2015; Nelson et al. 2010; Timperley & Parr, 2004). Kemmis and McTaggart (1988, p. 23) emphasise that collaboration is the main characteristic of action research, as: “it involves those responsible for action in improving it, widening the collaborating group from those most directly involved to as many as possible of those affected by the practices concerned”. Carr and Kemmis (1986, 2005) have argued for becoming critical and staying critical in the field of action research. Therefore, there is a need for a fundamental shift when thinking about professional learning; for example, through teacher engagement in systematic and collaborative inquiries in the classroom (Wennergren, 2016).

There is strong evidence to suggest that knowledge development in action research may require collaboration to ensure validity (Norris, 1997). Another key criticism of action research is that it is not a legitimate form of research (Hodgkinson, 1957) because teachers are involved in action to such an extent that they cannot attain the critical distance that is characteristic of research. Furthermore, Feldman et al. (2018) point to other criticisms, namely that the quality criteria of traditional research cannot be achieved if lay persons do the research. Furthermore, they argue that action research leads to singular statements, rather than statements of general validity common in traditional research. As Elliott (1993, p. 176) argues: “teachers cannot significantly improve their practices in isolation without opportunities for discussion with professional peers and others operating in a significant role relationship to them”. Similarly, Fullan and Hargreaves (2012) claim that teachers will be short of professional capital without feedback and support.

Action research can be strengthened through various forms of partnership and collaboration, thus countering the above arguments. One way of achieving this sense of collaboration is by encouraging partnerships between teachers and critical friends. Punch and Oancea (2014) discuss how this collaboration is often discussed in terms of the relationship between teacher researchers and their critical friends, who are usually their teaching colleagues. Pine (2009) explores how action research, when it includes insights from critical friends, can empower teachers to identify and solve their problems, leading to a deeper understanding of the implications of teaching practice on pupils’ learning. The concept of critical friends rests on the premise that schools cannot be intellectually engaging places for pupils unless their teachers are likewise actively engaged in their respective learning communities (Carr, 2008; Wennergren, 2016). Teachers need to be proficient collaborators to perform their job successfully, as the educational sector nowadays is increasing pressure on them to collaborate.

### **CRITICAL FRIENDS**

The Oxford English Dictionary defines a “friend” as someone with whom one experiences mutual affection and has a bond. However, this definition does not facilitate the operationalisation of critical friends in action research. Coghlan and Brydon-Miller (2014) emphasise that

friends offer meaning through the use of common language and the process of challenging one another. A friend is a person who forges a relationship with the stated intention to sharpen a partner's vision or understanding (Coghlan & Brydon-Miller, 2014). The term friend is quite an ambiguous concept for use in research (Fischer, 1982); therefore, a clear terminology of the word should be discussed based on the specific context in which it is used (Vangrieken et al., 2015). In the action research literature, a critical friend is widely defined as a trusted person who is invited to join an action research project based on the qualities of knowledge, experience, and skills (Campbell et al., 2004). Generally, the roles of critical friend are to ask provocative questions, provide data to be examined through another lens, and offer a critique of a person's work as a friend (Costa & Kallick, 1993).

The words "critical" and "friend" create a tension as: "...a critical friend provides an appropriate balance between support and challenge" (Watling et al., 1998, p. 61). However, MacBeath and Jardine (1998, p. 41) highlight that the real meaning of critical friendship is not a simple trade-off between the competing roles of friend and critic, but rather a richness resulting from combining both: "a successful marrying of unconditional support and unconditional critique". In education, critical friends are underpinned by the notion that teacher-researchers, who are intellectually engaged in collective learning, improve their practice. However, while such collective learning leads to improved learning (Kember et al., 1997), forming effective critical friend relationships is complex (Wennergren, 2016). For example, such friendships have been found to contain many varied roles (Kember et al., 1997). In addition, they are often constrained by: "...hesitancy, initial shyness, empathy, trust, hidden agendas, power struggles, and resistance to learning" (Blake & Gibson, 2020, p. 4).

Critical friendship is developed through practical and voluntary partnerships, rooted in a common task of shared concern (Campbell et al., 2004). A critical friend is an advocate for the success of the work, takes the time to fully understand the context of the work presented, and the outcomes that the person or group is working toward (Coghlan & Brydon-Miller, 2014). Baskerville & Goldblatt (2009) stress that while the development of such relationships takes time, they can be enhanced by using "protocols" for offering critique. In particular, protocols that address the clarification of participants'

roles and responsibilities assist critical friends to scrutinise each other's practice while providing a safe environment (Blake & Gibson, 2020). Therefore, the friendship needs to be a relationship that is sustained over time and is built upon trust, so that each individual in the partnership develops greater understanding of the inquiries brought to the fore—the relationship is reciprocal, not hierarchical (Coghlan & Brydon-Miller, 2014).

In action research processes, teachers work together with teaching colleagues who endeavour to support their inquiries through examination, critique, and dialogue (Costa & Kallick, 1993). In the role of a critical friend, critique should not be seen as negative, but rather as generative (Coghlan & Brydon-Miller, 2014). Swaffield (2007) warns that the deepening of friendship and an associated strengthening of trust enables the critique to be increased and considered without defensiveness. In the first instance, Wennergren and Rönnerman (2006) highlight that critical friends need to develop an awareness of how to function within a relationship to promote a trusting relationship culture while being critical. Meanwhile, Campbell et al. (2004) see critical friends as a way to self-monitor practice in the classroom while putting on a “different hat”, and moving from teaching to teacher researcher mode. This conception differs considerably from the “mentor” relationship in which one person (the mentor) holds a superior relationship by their experience, knowledge and skills (Campbell et al., 2004).

### **THE NEEDS OF CRITICAL FRIENDS**

The primary purpose of teacher action research is mainly to improve one's educational and pedagogical practices in a specific context. However, as discussed above, teacher-researchers cannot improve their practices by themselves without the opportunity to discuss these with teaching colleagues and professional peers (Elliott, 1991). Since critical friends' prominent roles are to ask critical questions, they become participant-observers directly and indirectly, and become peer reviewers to the teacher-researcher (Costa & Kallick, 1993). Incorporating critical friends into action research studies is crucial for adequate quality action research studies (Leuverink & Aarts, 2019). Critical friends can facilitate action research progress, offer a different

interpretation of the data, and become the teachers' alter ego, enabling trustworthiness to be closely linked to transparency (Wennergren, 2016). Published action research studies have used critical friends as part of research triangulation to validate their research data, thus offering the initial foundation on which the interpretive agreement is built (Coghlan & Brydon-Miller, 2014). In this sense, a critical friend seeks to bring about a more complicated agreement by searching for deeper meanings and evidence and looking for possible alternative explanations, most often through the use of repetitive protocols or processes (Coghlan & Brydon-Miller, 2014).

A range of action research literature debates the importance of collaboration with other people (defined as critical friends) as one criterion for measuring the quality of action research studies (see Elliott, 2007; Feldman, 2007; Heikkinen et al., 2007; Leuverink & Aarts, 2019). Winter (2002) proposes the principle of dialectics as a diversity of perspectives ideal for an action research report. In practice, this principle means that teacher-researchers do not base their action research texts on their monologues or voices but rather combine different interpretations from the findings and personal voices. For instance, when the teacher-researcher wants to respect the complexity and stratification of reality in their action research reports, the researcher should be willing to highlight this stratification of social reality in their report (Winter, 2002). The principle of dialectics is based on the idea that social reality is constructed as a dialectical process through interpersonal discussions. A teacher-researcher who respects this principle optimally gives space to the different voices and interpretations of the same events, in a process known as triangulation. Winter (2002) suggests that the action research report should aim to reproduce the voices of different people as authentically as possible, to keep them so genuine and original that the informants can recognise their thinking.

Similarly, Herr and Anderson (2014) propose a criterion of quality for action research, namely: i) dialogic and process validity, ii) outcome validity, iii) catalytic validity, iv) democratic validity, and v) process validity. They argue that democratic validity refers "to the extent to which research is done in collaboration with all parties who have a stake in the problem under investigation" (Herr and Anderson, 2014, p. 55). This criterion reflects the collaborative nature of action research

in that teacher-researchers should collaborate and seek a dialogue with stakeholders (Leuverink & Aarts, 2019). Indeed, the collaboration of stakeholders such as teaching colleagues, pupils, and parents as part of the action research process speaks to the collaborative character of action research suggested in the literature (see Carr & Kemmis, 2005; Cochran-Smith & Lytle, 2009). Meyer (2000) emphasises that all stakeholders play an active role in the research as active participants or critical friends. During the research process, the teacher-researcher holds a continuous dialogue with the stakeholders (Heydenrych, 2001). Thus, action research is a joint enterprise and collaborative action (Leuverink & Aarts, 2019).

On the other hand, McNiff (2017) emphasises the importance of critical friends (or validators) in action research studies. Action research aims to make a knowledge claim, specifically that the teacher-researcher has learned how to improve his/her/their practice (McNiff & Whitehead, 2012). This fundamental claim can be seen as an individual opinion, as in action research, knowledge claims are grounded in subjective experience (McNiff, 2017). In this sense, teacher-researchers need to get other people to agree that their claim to validity is credible by establishing its external validity (McNiff, 2017). However, Pine (2009) argues that action research should go beyond mere pragmatism in a local situation. The question of validity in action research should be premised not on how the teacher-researcher can ensure that findings are valid but rather how they can ensure that procedures are specific and rigorous (Winter, 2002). Pine (2009) suggests that such a knowledge claim can be accomplished through a reconceptualisation of action research as a form of professional development with critical friends. Over time, rigorous procedures for incorporating critical friends into action research have been suggested in the literature (see Fletcher, 2019; Franzak, 2002; Swaffield, 2008)

### **THE ROLES OF CRITICAL FRIENDS**

The roles of critical friends are endless and depend upon the context. They can act as a facilitator, supporter, critic, or challenger (Swaffield, 2004), an external conversationalist (Foulgar, 2010) and even as a “...financier, project design consultant, rapport builder, coffee maker, mirror, teaching consultant, evaluation advisor, research advisor,

resource provider, writing consultant, match maker and deadline enforcer” (Kember et al, 1997. p 463). The most basic role of a critical friend is that they can be people from inside and outside the targeted community, in this case, the school itself. Having an insider as a critical friend will benefit the teacher-researcher in terms of familiarity between them individually, and between the research context and setting (Coghlan & Brydon-Miller, 2014). Opting for an outsider with no relation to the research sites and context could lend itself to a non-biased judgment as long as they are well-informed of the action research process.

In a published action research study, Foulgar (2009) reported that she chose her critical friend, who is not from the same school, to help her with data analysis because she was from the same profession and had knowledge and experience of doing similar research. Wennergren (2016) described a different situation, as she placed herself as a facilitator and critical friend to 66 teachers to introduce structured support to improve professional development processes in schools. The complexity of the critical friends’ friendship is explained by Stolle et al. (2019). They propose a critical friend definition continuum where they summarise all the mentioned roles in terms of how they can be enacted and applied in action research (see Table 1 below). This continuum offers a clear idea of how teacher-researchers can choose their critical friends based on their roles, the number of people involved, their level of expertise, shared values, and expectations, to name a few factors.

**Table 1**

*Critical Friend Definition Continuum* (Stolle et al., 2019, p. 23)

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Close friends	←----->	Strangers
Insiders		Outsiders
Experts		Non-experts
Fully involved		Loosely involved
Reciprocal in nature		One way
Multiple critical friends		Single critical friend
Productive		Non-productive
Defined expectation		No defined expectation

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## **The Roles' Clarity**

In Wennergren's (2016) research, the roles of critical friends were hard to internalise and most of the teachers did not embrace their full learning potential. The reasons for this reluctance include that teachers might feel shy and embarrassed about revealing their own teaching "pandora box" to a stranger. As described by McLaughlin (2000), there is a tension between risk-taking and current comfort levels. Thus, teachers become passive participants and act as an "empty vessel" that only receives the knowledge, rather than a two-way communication mode (Groundwater-Smith & Mockler, 2009; Kincheloe, 2012). Although the list can be limitless, the roles are often impacted by internal and external contextual factors, such as teachers' beliefs, school contexts, and levels of support offered (Blake & Gibson, 2020), to name a few. Thus, having role clarity at the beginning of the process is crucial in ensuring that everybody involved is aware of how they should contribute to the role itself. In addition, it can encourage teacher-researchers to be more active with the roles they are assigned as critical friends.

An action research philosophy states that teachers are not an empty vessel for teaching and implementing classroom pedagogy (Rodriguez, 2012). Due to frequent changes in educational policy and implementation, they might have lost the ability to follow transformation, thus settling for what they are used to doing daily. This is a common characteristic for teachers' cognition as they respond to a new educational policy due to their preconceived beliefs, teaching experiences and contextual factors that have influenced their teaching practices all along (Borg, 2015; Pajeras, 1992). The specifics of roles and boundaries should be outlined at the beginning of the critical friends' process (Swaffield & McBeath, 2005), particularly determining the goal of the research study. The purpose of this is to avoid problems such as communication breakdowns, ownership of the study, power relations, types of support required and interpersonal relationships, while carrying out action research (Baskerville & Goldblatt, 2009; Cebrián, 2016; Kember et al., 1997; Pettigrew, 2003).

In a context where critical friends are drawn from education officers, who hold higher rank positions than the teacher-researcher, Swaffield and MacBeath (2005, p. 251) argue that "...it may be difficult for them to stray too far from policy agendas and political objectives.

The freedom to be intellectually provocative and challenging of received wisdom lies close to the heart of the critical friend's value and purpose". Consequently, the initial objective of the critics and action research might not be achieved. Having role clarity about and a common understanding of the role shared by critical friends and school colleagues would be helpful, as shared by Swaffield (2007). The work's success rests on the negotiation of their role with the school and the research study, although due to time constraints, initial expectations might not have been realised. Teachers seek this flexibility given the demanding teaching and administrative responsibilities that they have in their profession.

## **CRITERIA OF CRITICAL FRIENDS**

The choice of a critical friend arises naturally due to a team of people working together towards a common goal (Baskerville & Goldblatt, 2009). First, however, it is crucial to have a set of criteria to identify critical friends. These criteria will help the teacher-researcher to improve the relationship and to make it as productive as possible as it progresses. It can also act as a framework for implementation for novice collaborators. Swaffield (2005) identified five criteria of critical friends, namely i) roles, ii) behaviours, iii) knowledge and experience, iv) skills, and v) qualities. In this section, the criteria were adapted, grouped, and arranged accordingly to show each point's relevance and importance in selecting the critical friends.

### **Qualities**

The critical friend relationship should be based on building a sense of mutual trust between both parties. In this case, the teacher-researcher and the critical friend should have already established trust based on the close professional and personal relationship. This understanding is necessary because not only does it promote effective relationships (Block, 2001), but it also makes one aware that the critical friend is not there to judge, meddle, or negatively criticise the teacher-researcher's actions in the classroom (Costa & Kallick, 1993). Agreement about the boundaries should be achieved during the "reconnaissance" phase when both parties sit together and have an initial conversation about the whole idea of conducting a piece of action research. Stolle et

al. (2019, p. 25) outlined a guide (as shown in Table 1 below) with questions that teacher- researchers should ask themselves to ensure quality assurance throughout the action research study. It can also act as a reminder, and can offer clarity, a sense of purpose, and tools for teachers, while encouraging reflection on the whole process. Besides trust, Swaffield and McBeath (2005) outline that critical friends who have shared values, a willingness to engage, and an awareness of the task would tremendously benefit from the relationship.

**Table 2**

*Guide for Quality Assurance* (Stolle et al., 2019, p. 25)

Phase	Guide for quality assurance
Start	- Why should I have critical friends?
	- What is the purpose of the critical friendship?
	- What do I hope to gain?
Throughout	- What do critical friends do?
	- What should the critical friends reflect on?
End	- How did the critical friendship impact the study?
	- Did the critical friends offer alternate perspectives, lead you to new insights, or help to reframe your thinking?

## **Knowledge and Experience**

To have an effective collaborative process, adequate knowledge of how to do research (how to conduct action research, how action research works, how to analyse the data etc.) and an understanding of the context (school, students, subject, etc.) are still crucial in ensuring the collaboration reaches and achieves its full potential (Vangrieken et al., 2015). Critical friends should at least have an equal knowledge level to the teacher-researchers, due to their roles, to offer critique, facilitate discussion, and suggest improvement of the problem to apply new knowledge (Stoll et al., 2006). Having this equal level of expertise will encourage parties to complement each other to achieve an appropriate balance between becoming a total friend and a full critic (Dahlgren et al., 2006).

However, although an emphasis is placed on knowledge equality, this subject can be tricky, especially in navigating the power control of

partners. In this case, the quality of the critical friend will minimise the power control, thus creating a defenceless relationship whenever a critical and reflective discussion occurs. For example, Foulgar (2010) described her critical friend as someone who did not share the same contextual knowledge, since they were teaching at different schools. Nevertheless, she was able to feed her critical friend enough information regarding the research setting, and she needed her expertise to help her get through the data analysis stage of her research. Thus, knowledge of the context cannot be acquired until a mutual understanding of the setting is reached to have a "... provocative questioning, informed critique, and provision of an alternative perspective" (Swaffield, 2007, p. 216). Therefore, lack of detailed knowledge of the context will only create a superficial and surface level of discussion during the feedback level.

### **Behaviours and Skills**

Swaffield (2005, p. 45) refers to a critical friend's behaviours as "... the specific things that the critical friend does", which include the act of listening, questioning, reflecting, giving feedback and summarising. All of these aspects need to be accomplished skilfully for the role to be effective. Hill (2002) proposes that a critical friend should be attentive to the participants and room climate and act as reflective listeners who frequently check for meaning and suspend judgment. They listen and be eloquent as they clearly express thoughts and ideas. This is important, since they are providing advice to the teacher-researchers. Skills in this context refer to the techniques employed by the critical friends in fulfilling their roles. A few skills that are essential to be considered as a critical friend, include, for example, communication skills, data analysis skills and interpretation skills, since the involvement of a critical friend can occur during any phase (at the beginning, during data analysis etc) within the action research process.

Firstly, to offer effective communication skills, a critical friend should use common, straightforward language and convey difficult messages clearly (Swaffield, 2005). This is crucial because it can hinder any misunderstandings, ambiguous messages, and negative interpretations of the session. Secondly, to complement the speaking skills, appointing someone who is a reflective listener is also

encouraged. Listening is a vital skill for its own sake, especially when a critical friend needs to gather the information and understand the school context. Listening without any judgment and engaging with the stories told is crucial. Thirdly, the questioning skill, which is described as "...knowing the right question to ask at the right time, framing the question that will elicit the widest responses and open up a professional discussion" (Swaffield, 2005, p. 53) is essential, since knowing what and when to ask something can help both parties to be open within their conversation. This is especially important when seeking to ensure the targeted participant can respond critically without becoming defensive.

## **THE CRITICAL FRIENDS PROTOCOL**

Since critical friends' roles revolve around the action research framework, implementing the roles is based on a classical action research model, which consists of four phases. These phases were adapted from Kemmis et al.'s (2014) work and were incorporated into the critical friend's roles. The phases offer a further description of the process, related examples, and critical questions suggestions, as synthesised from the literature (see Table 3). In addition, this protocol should offer guidelines for teacher-researchers, so they are clear about participants' roles and responsibilities, and can thus assist critical friends to scrutinise each other's practice, while continuing to provide a safe research environment (Blake & Gibson, 2020).

### **Phase 1: The Reconnaissance**

The reconnaissance phase is the beginning phase where the teacher-researcher and critical friend sit together and identify the main issue they are trying to solve, address, or improve (Kemmis et al., 2014). At this stage, all have recognised the role of the critical friend and have agreed upon boundaries, notably to what extent the critical friend can be involved in the whole process (see Table 2; see also Stolle et al., 2019). This process is fundamental for both parties, as it will determine the direction of the research. During this phase, the critical friend should have developed the ability to ask critical questions, probe further the stories, and understand the context as much as possible, depending on their roles (Costa & Kallick, 1993). It is

advisable to use an open-ended questioning style to allow the teacher-researcher to think about and reflect upon their current practice and any issues encountered (Hendricks, 2017). At this stage, the critical friend should refrain from offering any advice or opinions regarding the issues. This is where the “trust” of being a critical friend should be established, rather than offering knowledge, experiences and skills to the teacher-researchers.

## **Phase 2: Planning**

The planning phase is often overlooked in the action research process, probably due to an inability to oversee the whole plan as a blueprint for the research study. Once the objective is set, a systematic action plan should be set out for how to achieve it. The usage of the SMART approach (Brown et al., 2016) could help the teacher-researcher to narrow down the planning. This acronym refers to being specific, measurable, achievable, relevant, and timely in deciding the research project. For example, what aspect of practice will be observed? What type of data do teachers want to collect? What collection method is appropriate to use? How long will the whole study take? These will be the guiding procedures when conducting Phase 3. However, although thorough planning is engaged in, the teacher-researcher should be aware of and expect that the research study will not be linear and that unexpected events are always bound to happen (Hendricks, 2017). In this case, a backup plan is needed, when things are not moving along according to the initial proposal. In this case, the critical friend could step in and try to probe further, by inquiring about the potential pitfalls that might have jeopardised the study in the long run (Mertler, 2017). Then again, given the nature of action research, the pitfalls should act as a reflective process to explore what works and how teacher-researchers can improve the process to make it work to achieve the study’s objectives.

## **Phase 3: Acting and Observing**

This is the phase when teacher-researchers put their plan into action by gathering data from the research setting. During this phase, the critical friend could act as a participant-observer, sit at the back of the classroom and observe the teaching practices (Costa & Kallick, 1993). The role of the critical friend is to use the knowledge, experiences,

and skills that they have acquired in observing the teacher-researcher and the teaching. Evidence of the practices should be documented to provide critical feedback for improvement. The evidence could be collected through fieldnotes, questionnaires, video recordings, after lesson interviews, and diaries, to name a few sources. Since action research is an iteration process, constantly monitoring, evaluating and changing the plan appropriately is advisable in getting the desired result (Wennegren, 2016). Consequently, this phase could be considered an active process in the critical friend partnership (Hendricks, 2017).

#### **Phase 4: Reflecting**

Now that evidence has been gathered and observed, both participants reflect upon and write up the whole process of the action research (Mertler, 2017). The reflection could be written in two parts: i) the main objectives of the research and the practices implemented, and ii) methodological aspects of the research. The teacher-researcher reflects on the experiences, the process, outcome of the research, and suggestions raised by the critical friend. For example, the teacher-researcher may reflect on whether changes make this work better or worse? What have I learned from this refocusing process? The critical friend should respond to the teacher-researcher with constructive suggestions or advice appropriate to the desired outcome. The teacher-researcher does not have to respond to this. The most important aspect is to reflect on the critique offered as part of the process (Hendricks, 2017).

**Table 3**

*The Critical Friend Protocol in Action Research, as Synthesised from the Literature*

Phase	Description of the phase	Critical friend's roles	Examples	Critical questions to be posed
1. Reconnaissance	To identify problems/issues with educational practices that need improving.	To ask critical questions in order to understand the issues and the context of the educational setting.	Examples of problems/issues: - Researching approaches to teaching - Examining one's teaching pedagogy - Supporting a pedagogical innovation - Looking for new problem-solving techniques	- How do you feel about ...? - Tell me about ...? - Can you explain ...? - What do you want to improve in your teaching and learning?
What are the problems/issues encountered in the educational practices?				
2. Planning	To plan an intervention (and data collection method) to solve problems/issues identified in the reconnaissance phase.	To ask critical questions to clarify the proposed plan for the teacher-researcher, including an intervention plan and data collection method.	Examples of planning contents: - Intervention plan - Intended objectives and outcomes - Methods of data collection - Ethical considerations	- Specific – How well defined and clear are the plan's objective? - Measurable – How can you measure the progress? - Achievable – How can the target/outcome be achieved? - Relevant – How is the plan applicable to solve the problem? - Timely – Is the timeframe sufficient to execute the plan?
How can we identify interventions to overcome the problems/issues?				
What types of data should be gathered?				

(continued)

Phase	Description of the phase	Critical friend's roles	Examples	Critical questions to be posed
3. Acting and observing	To gather relevant evidence of the educational practices based on the action plan.	To act as a participant-observer to observe how the intervention is carried out.	Examples of data collection techniques: - Diary writing - Video recording - Critical friend's notes - Critical reflection journal - Observation checklist	- Is the teacher-researcher implementing the intervention according to the plan? - Are the pupils participating in the activities and discussion? - How do the pupils respond to the teacher and the changes? - What types of questions does the teacher-researcher ask and when?
How can the intervention be executed?		To document all the sessions and provide feedback for improvement		
How can the data be gathered from the planning?				
4. Reflecting	To reflect on the findings, decide whether to carry on, adapt, or revise the plan.	To provide feedback, raise critical questions and peer review the works.	Examples of reflection techniques: - Discussion - Conversation - Written feedback	- What did you learn about your teaching practices? - What have you learned thus far? - In what ways have the practices/learning processes changed? - What is the significance of this learning? - Is there anything else you want to try out now?
How can evidence be generated from the data?				
How can the ideas and practices be modified in light of the evaluation?				

## **ILLUSTRATIONS OF CRITICAL FRIENDS IN ACTION RESEARCH STUDIES**

Three case studies were extracted from the literature (Blake & Gibson, 2020; Gray et al., 2019; Vo & Mai Nguyen, 2010) to illustrate the roles of critical friends in action research studies. These studies were chosen to reflect the critical friend protocol proposed in this review. All three case studies provided sufficient evidence showing the roles of critical friends in each phase of action research, including reconnaissance, planning, acting and observing, and reflecting.

### **Case Study 1**

Gray et al. (2019) reported on action research studies conducted by two physical education teachers in Scotland who worked within a small community of practice, including their pupils, physical education department and two researchers. The researchers worked with the teachers to develop their research aims and support them in their role as critical friends. In other words, they sought to scaffold, challenge, and bring alternative perspectives to their learning. The researcher also brought both teachers together upon completing their respective inquiries to articulate, discuss (with the researchers and each other), and analyze their learning experiences. Both teachers were situated in different contexts but shared similar values around teaching and learning. The teachers expressed their desire to learn, improve, and provide their pupils with a more positive understanding. In particular, the teachers aimed to impact their pupils' personal and social development in the physical education context and the broader school community.

At the beginning of the action research studies, the teachers examined their data to explore and understand ideas related to their learning activities, teaching, and pupil experience. Both teachers were then invited to discuss their findings individually with the researchers, which generated further understandings of their learning experiences. After these meetings, the researchers invited both teachers to share their experiences and findings. The meeting provided the teachers with another opportunity to develop and focus their ideas and encouraged them to uncover previously unconsidered experiences resulting from ideas triggered by the other teacher. The teachers invited several

external critical friends to observe their teaching and support their reflections. Their critical friends came from different contexts, which resulted in quite different learning experiences. With the help of critical friends, the teacher engaged in critical discussions about their teaching, their pupils' learning, and their action research beyond the school gates. The teachers also had critical friends (volunteers) from within the schools, who they invited to observe and discuss their lessons.

The study reported that the action research studies the teachers carried out encouraged them to explore different ways of engaging with their learners, through reflective and planning activities and discussions, which took them on a learning journey beyond the studies themselves. Hence, when teachers are committed to their learning, and when the subject of their learning aligns with their core values, professional needs, and pupils' needs, pedagogical change is possible.

## **Case Study 2**

Vo and Mai Nguyen (2010) conducted an in-depth study, which presented how four English primary school teachers engaged in a critical friend group in the form of continuous professional development for one school semester. The teachers, who were teaching the same course of primary English and following the same curriculum, were involved in a full critical friend group process, which involved three feedback meetings.

At the beginning of the study, the teachers participated in a two-hour orientation meeting at a cafe. The researchers offered an overview of the critical friend protocol proposed by Franzak (2002) which helped the teachers understand its core principles. The meeting results were that the teachers agreed to begin the critical friend group from the second week of their ten-week school semester and divide their critical friend group process into three three-week cycles. The teachers decided to put themselves into two pairs and observe their pair partner's class once during the first two weeks of each cycle using the observational focus on motivational techniques (establishing by themselves what should be included in the observation form). The teachers also agreed to hold a subsequent feedback meeting with the four participants in the third week, to pair with another colleague after each cycle, and

to hold a subsequent feedback meeting after each circle among the four participants. As a result, the teachers each carried out three class observations, and had all attended three feedback meetings, which took place at a reasonably quiet garden café. They chose this location to create a friendly atmosphere. During each feedback session, the teachers discussed what they had learned from each other's teaching performance and what they thought should be improved and how. The researchers who conducted the study served as meeting facilitators because it was the first time the teachers took part in this critical friend group. Having a facilitator in the process helped the teachers to be actively involved in the reflection and discussion. However, the researchers asserted that it did not affect the process because the researchers were considered as their peers.

The study reported that the critical friend group offered the teachers a rare opportunity to exchange their professional ideas, learn from each other, and help each other develop professionally in a relaxed manner. It also allowed the teachers to build up good working relationships and a sense of professional community. Through peer observation and discussion, the teachers had learnt about and adopted some of the other teachers' instructional techniques. The researchers showed that the teachers adjusted their strategies to improve the teaching of a particular class. The teachers became more inspired and creative in enlarging their micro-teaching techniques to make their lessons more engaging. The teachers also said that they had become more motivated to teach due to the critical friend group process. The researchers' feedback sessions led to more active reflection on their teaching, which then supported changes in practice.

### **Case Study 3**

Blake and Gibson (2020) conducted a collaborative action research study in New Zealand, with four secondary schools' teachers, using critical friends group discussion protocols. The study was run over six months, comprising the middle two school terms. The teachers were asked to self-select individual inquiry foci, which they would investigate to enhance their teaching practice for increased pupil learning. To facilitate the collaborative action research process, the four teachers met, as a group, with the teacher-educators each fortnight for four hours. During this time, they were supported through the action

research process. Additionally, the teachers were engaged in collegial discussions around their research, team-building exercises to support building trusting relationships, reading literature pertinent to their inquiry, and being mentored with ideas to trial relevant approaches to their research.

Critical friends group discussions were implemented halfway through the 20-week collaborative action research schedule, to support the key elements of challenging existing ideas and engaging in collegial critique. This occurred when the teachers had established their research questions, collected initial data, read current literature, planned a course of action, and began to implement practices that would enhance pupil learning. This occurred when teachers started to come across challenges to implementing their ideas, or the desired impact of their practice on learners was not being realised. Critical friends group discussions were included to promote robust and pedagogically rich conversations about the problems teachers were facing and to encourage them to look for ways to improve their teaching skills for enhanced pupil learning.

The study reported how conversations were deepened by using critical friends group protocols within collaborative action research studies. In short, critical friends' groups: i) offer a shared purpose to guide conversations, ii) protect participants from personal conflict, iii) protect presenters by allowing them ownership of issues, iv) allow the presenter to listen and understand, v) increase the pedagogical knowledge available to the group, and vi) facilitate classroom observations to support problem finding.

## **IMPLICATIONS FOR PRACTICE**

In the previous section, three case studies from the literature illustrate how critical friends have been incorporated into action research studies. All three case studies adapted from the literature (Blake & Gibson, 2020; Gray et al., 2019; Vo & Mai Nguyen, 2010) have implemented the critical friends' framework at the beginning of their action research studies, also known as the "reconnaissance" phase (Kemmis et al., 2014). Critical friends' role in this phase is mainly to ask critical questions to understand the issues and the context of the

specific situations. After the issues and problems to be investigated were identified, the teachers worked with their critical friends to plan interventions and investigative methods. In case study 3, the “planning” phase was supported by critical friends group discussion protocols facilitated by teacher-educators. The participating teachers also read literature related to their inquiry and discussed each other’s planned course of action with critical friends (Blake & Gibson, 2020). In the “acting and observing” phase, the critical friends act as participant observers, as illustrated in case studies 1 and 2, in which teaching interventions were observed and teachers’ reflections were supported. This resulted in quite different learning experiences (Gray et al., 2019; Vo & Mai Nguyen, 2010). Critical friends were also actively involved in the reflection and discussion of the final phase – “reflecting” – as visualised in all three case studies.

The presented case studies demonstrate the roles of critical friends in action research, which reflects the overarching aim of this narrative review paper. This review critically discussed four main aspects of critical friends: the terminology, the needs, the roles, and the criteria of critical friends. Based on the literature reviewed, terminology related to critical friends should be discussed in a specific context (Vangrieken et al., 2015). In this paper, it was specifically dedicated to teacher-researchers when researching their educational practices in schools. Other than being expected to ask provocative questions, act as another lens to the situation, and critique the teachers’ work based on a friend’s capacity (Costa & Kallick, 1993), critical friends also act as participant-observers in the process of classroom observations. In particular, this review define a critical friend as a person who asks critical questions, acts as a collaborative planner, a participant-observer, and a peer reviewer, according to the action research phases of reconnaissance, planning, acting and observing, and reflecting (Kemmis et al., 2014). This definition also provides flexibility for roles to be carried out by different people if needed, as long as these roles have been agreed to in advance (Stolle et al., 2019).

Due to the critical friend’s role as the teacher’s alter ego, there will be a power struggle between teacher-researchers and critical friends, due to critiques and opinions offered (Blake & Gibson, 2020). Establishing a sense of mutual trust is the core quality for the relationship to be successful, given the characteristics of the roles

who seek to provoke teachers' action in the classroom (Fletcher et al., 2016). Besides, the critical friend can also offer external validity to the data collection process, thus reducing the importance of individual opinions in conducting the research study (McNiff, 2017). Action research literature has extensively discussed the importance of collaboration with critical friends as one criterion for measuring the quality of action research studies (Elliott, 2007; Feldman, 2007; Heikkinen et al., 2007). Though the roles of critical friends can be endless (Foulgar, 2010; Kember et al., 1997; Swaffield, 2004), there should be clarity as to what extent the role could interchangeably interfere during the research process, so that both people are aware of how much they should contribute to the collaboration (Swaffield, 2007). Identifying crucial aspects of critical friends such as the roles' qualities, knowledge and experiences, and behaviour and skills, could influence the direction of the research work.

Since collaboration is one of the core characteristics of action research, having a successful and active relationship is a must to support teacher-researchers' development (Waters-Adams, 1994). In this case, the critical friend is included as one of the criteria for measuring the quality of action research studies (Leuverink & Aarts, 2019). As a result of this extensive literature review, a critical friends' protocol (as in Table 3) was proposed for usage by teachers who intend to undertake reaction research to improve their educational and pedagogical practices. Therefore, incorporating a critical friend protocol while carrying out educational research in a classroom setting can be a pragmatic tool for teacher-researchers to explore how the role can be integrated into the research timeline. Again, this is just a suggestion as to how to incorporate the role of the critical friend into action research studies, which could be adapted according to teacher-researchers' relevant contexts. Nevertheless, teachers should value critical friend roles in carrying out the action research as part of collegial discussion, collaboration, support, peer scrutiny and review, as the benefits cannot be overstated. In conclusion, this review indicates the roles of critical friends can be used as a powerful tool to support teachers' development and enactment of pedagogical innovations in educational practice, while also enhancing the personal and professional development of the teacher educators engaged in those practices.

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## REFERENCES

- Baskerville, D., & Goldblatt, H. (2009). Learning to be a critical friend: From professional indifference through challenge to unguarded conversations. *Cambridge Journal of Education*, 39(2), 205-221. <https://doi.org/10.1080/03057640902902260>
- Bielaczyc, C., & Collins, A. (1999). Learning communities in classrooms: A reconceptualization of educational practice. In C. M. Reigeluth (Ed.), *Instructional design theories and models* (Vol. 2, pp. 269–292). Lawrence Erlbaum Associates.
- Blake, J., & Gibson, A. (2020). Critical friends group protocols deepen conversations in collaborative action research projects. *Educational Action Research*, 1-16. <https://doi.org/10.1080/09650792.2020.1717568>
- Block, P. (2001). *The flawless consulting fieldbook and companion*. Jossey-Bass-Pfeiffer.
- Borg, S. (2015). *Teacher cognition and language education: Research and practice*. Bloomsbury Publishing.
- Brown G., Leonard G., & Arthur-Kelly, M. (2016). Writing SMARTER goals for professional learning and improving classroom practices. *Reflective Practice*, 17(5), 621-635. <https://doi.org/10.1080/14623943.2016.1187120>
- Campbell, A., McNamara, O., & Gilroy, P. (2004). Critical friendship, critical community and collaboration. In A. Campbell, O. McNamara, & P. Gilroy (Eds.), *Practitioner research and professional development in education* (pp. 106-124). <https://dx.doi.org/10.4135/9780857024510>
- Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research*. Routledge. <https://doi.org/10.4324/9780203496626>
- Carr, W., & Kemmis, S. (2005). Staying critical. *Educational Action Research*, 13(3), 347-358.
- Chan, C. K., & Fai Pang, M. (2006). Teacher collaboration in learning communities. *Teacher Education*, 17(1), 1-5. <https://doi.org/10.1080/10476210500527899>

- Chen, J., & Brown, G. T. (2016). Tensions between knowledge transmission and student-focused teaching approaches to assessment purposes: Helping students improve through transmission. *Teachers and Teaching*, 22(3), 350-367. <https://doi.org/10.1080/13540602.2015.1058592>
- Cochran-Smith, M., and S.L. Lytle. (2009). *Inquiry as stance: Practitioner research in the next generation*. Teachers College Press.
- Coghlan, D., & Brydon-Miller, M. (2014). Critical friend. In D. Coghlan, & M. Brydon-Miller (Eds.), *The SAGE encyclopedia of action research* (pp. 207-208). Sage. <https://doi.org/10.4135/9781446294406>
- Collins, A., Brown, J. S., & Newman, S.E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, learning and instruction: Essays in honor of Robert Glaser* (pp. 453-494). Lawrence Erlbaum Associates.
- Costa, A. L., & Kallick, B. (1993). Through the lens of a critical friend. *Educational Leadership*, 51(2), 49-51.
- Curry, M. (2008). Critical friends groups: The possibilities and limitations embedded in teacher professional communities aimed at instructional improvement and school reform. *Teachers College Record*, 114(4), 733-774.
- Dahlgren, L. O., Eriksson, B. E., Gyllenhammar, H., Korkeila, M., Sääf-Rothoff, A., Wernerson, A., & Seeberger, A. (2006). To be and to have a critical friend in medical teaching. *Medical Education*, 40(1), 72-78. <https://doi.org/10.1111/j.1365-2929.2005.02349.x>
- Elliot, J. (1991). *Action research for educational change*. McGraw-Hill Education.
- Elliott, J. (1993). What have we learned from action research in school-based evaluation?. *Educational Action Research*, 1(1), 175-186. <https://doi.org/10.1080/0965079930010110>
- Elliott, J. (2007). Assessing the quality of action research. *Research Papers in Education*, 22(2), 229-246. <https://doi.org/10.1080/02671520701296205>
- Eyler, J. R. (2018). *How humans learn: The science and stories behind effective college teaching*. West Virginia University Press.
- Feldman, A. (2007). Validity and quality in action research. *Educational Action Research*, 15(1), 21-32. <https://doi.org/10.1080/09650790601150766>

- Fischer, C. S. (1982). What do we mean by 'friend'? An inductive study. *Social Networks*, 3(4), 287-306. [https://doi.org/10.1016/0378-8733\(82\)90004-1](https://doi.org/10.1016/0378-8733(82)90004-1)
- Fletcher A. (2019). An invited outsider or an enriched insider? Challenging contextual knowledge as a critical friend researcher. In M. Green, S. Plowright, & N. Johnson (Eds.), *Educational researchers and the regional university*. Springer. [https://doi.org/10.1007/978-981-13-6378-8\\_5](https://doi.org/10.1007/978-981-13-6378-8_5)
- Fordham, M. (2016). Realising and extending Stenhouse's vision of teacher research: The case of English history teachers. *British Educational Research Journal*, 42(1), 135-150. <https://doi.org/10.1002/berj.3192>
- Foulger, T. S. (2010). External conversations: An unexpected discovery about the critical friend in action research inquiries. *Action Research*, 8(2), 135-152. <https://doi.org/10.1177%2F1476750309351354>
- Franzak, J. K. (2002). Developing a teacher identity: the impact of critical friends practice on the student-teacher. *English Education*, 34(4), 258-70. <https://www.jstor.org/stable/40173075>
- Fullan, M., & Hargreaves, A. (2012). Reviving teaching with professional capital. *Education Week*, 31(33), 30-36.
- Gibbs, P., & Angelides, P. (2008). Understanding friendship between critical friends. *Improving Schools*, 11(3), 213-225. <https://doi.org/10.1177%2F1365480208097002>
- Gray, S., Wright, P. M., Sievwright, R., & Robertson, S. (2019). Learning to use teaching for personal and social responsibility through action research. *Journal of Teaching in Physical Education*, 38(4), 1-32. <https://doi.org/10.1123/jtpe.2018-0190>
- Groundwater-Smith, S., & Mockler, N. (2009). *Teacher professional learning in an age of compliance: Mind the gap* (Vol. 2). Springer Science & Business Media.
- Hargreaves, A. (2003). *Teaching in the knowledge society*. Teachers College Press.
- Heikkinen, H. L., Huttunen, R., & Syrjälä, L. (2007). Action research as narrative: Five principles for validation. *Educational Action Research*, 15(1), 5-19. <https://doi.org/10.1080/09650790601150709>
- Hendricks, C. C. (2017). *Improving schools through action research: A reflective practice approach* (4th ed.). Pearson.

- Herr, K., & Anderson, G. L. (2014). *The action research dissertation: A guide for students and faculty* (2nd ed.). Sage Publications Ltd.
- Heydenrych, J. (2001). Improving educational practice: Action research as an appropriate methodology. *Progressio*, 23(2), 37–51.
- Hodgkinson, H. L. (1957). Action research—A critique. *The Journal of Educational Sociology*, 31(4), 137-153. <https://doi.org/10.2307/2264741>
- Jacobs, J., Yendol-Hoppey, D., & Dana, N. F. (2015). Preparing the next generation of teacher educators: The role of practitioner inquiry. *Action in Teacher Education*, 37(4), 373-396. <https://doi.org/10.1080/01626620.2015.1078758>
- Kember, D., Ha, T. S., Lam, B. H., Lee, A., NG, S., Yan, L., & Yum, J. C. (1997). The diverse role of the critical friend in supporting educational action research projects. *Educational Action Research*, 5(3), 463-481. <https://doi.org/10.1080/09650799700200036>
- Kemmis, S., & McTaggart, R. (1988). *The action research planner* (3rd ed.). Deakin University Press.
- Kemmis, S., McTaggart, R., & Nixon, R. (2013). *The action research planner: Doing critical participatory action research*. Springer Science & Business Media.
- Kincheloe, J. (2012). *Teacher as researchers: Qualitative inquiry as a path to empowerment*. Routledge. <https://doi.org/10.4324/9780203497319>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Leuverink, K. R., & Aarts, A. M. L. (2019). A quality assessment of teacher research. *Educational Action Research*, 27(5), 758-777. <https://doi.org/10.1080/09650792.2018.1535445>
- Lieberman, A. (2000). Networks as learning communities: Shaping the future of teacher development. *Journal of Teacher Education*, 51(3), 221–227. <https://doi.org/10.1177%2F0022487100051003010>
- MacBeath, J. & Jardine, S. (1998). I didn't know he was ill – the role and value of the critical friend. *Improving Schools*, 11(1), 41–7. <https://doi.org/10.1177%2F136548029803010118>
- Mayer, M., & Dillon, P. (2016). Evaluating education for sustainable development programmes consistently with education for sustainable development values: A challenge for evaluators. In

- Lambrechts W., & Hindson, J. (Eds.), *Research and innovation in education for sustainable development* (pp. 242-256). Environment and School Initiatives.
- McLaughlin, C. (2000). Parallel processes in learning to learn: A school/university partnership focusing on developing the personal and social aspects of pedagogy. In M. Griffiths, & G. Impey (Eds.), *Working partnerships: Better research and learning* (pp. 77-79). Nottingham Trent University.
- McNiff, J. (2017). *Action research: All you need to know*. Sage Publications Ltd.
- McNiff, J., & Whitehead, J. (2012). *Action research for teachers: A practical guide*. Routledge.
- Mertler, C. A. (2017). *Action research communities: Professional learning, empowerment, and improvement through collaborative action research*. Routledge. <https://doi.org/10.4324/9781315164564>
- Meyer, J. (2000). Evaluating action research. *Age and Ageing*, 29(2), 8-10. <https://doi.org/10.1093/oxfordjournals.ageing.a008104>.
- Nelson, T. H., LeBard, L., & Waters, C. (2010). How to create a professional learning community. *Science and Children*, 47(9), 36. <https://www.jstor.org/stable/43175987>
- Norris, N. (1997). Error, bias and validity in qualitative research. *Educational Action Research*, 5(1), 172-176. <https://doi.org/10.1080/09650799700200020>
- Paavola, S., Lipponen, L., & Hakkarainen, K. (2004). Models of innovative knowledge communities and three metaphors of learning. *Review of Educational Research*, 74(4), 557-576. <https://doi.org/10.3102%2F00346543074004557>
- Pajares, M.F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307-332. <https://doi.org/10.3102%2F00346543062003307>
- Palincsar, A. S. (1998). Social constructivist perspectives on teaching and learning. *Annual Review of Psychology*, 49(1), 345-375. <https://doi.org/10.1146/annurev.psych.49.1.345>
- Petrie, K., & McGee, C. (2012). Teacher professional development: Who is the learner?. *Australian Journal of Teacher Education*, 37(2), 4. <http://dx.doi.org/10.14221/ajte.2012v37n2.7>
- Pettigrew, P. J. (2003). Power, conflicts, and resolutions: A change agent's perspective on conducting action research within a multiorganizational partnership. *Systemic Practice and Action Research*, 16(6), 375-391.

- Pine, G. D. (2009). The validity of action research. In G. J. Pine (Ed.), *Teacher action research: Building knowledge democracies* (pp. 80-91). SAGE Publications, Inc. <http://dx.doi.org/10.4135/9781452275079.n4>
- Punch, K. F., & Oancea, A. (2014). *Introduction to research methods in education* (2nd ed.). SAGE Publications Ltd.
- Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning?. *Educational Researcher*, 29(1), 4–15. <https://doi.org/10.2307/1176586>
- Richardson, V. (2001). Teaching: Trends in Research. In N. Smelser, & P. Baltes (Eds.), *International Encyclopedia of the social & behavioral sciences* (pp. 15483-15487). <https://doi.org/10.1016/B0-08-043076-7/02453-0>
- Richardson, V., & Placier, P. (2001). Teacher change. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 905–939). American Educational Research Association.
- Riel, M. (1998). Learning communities through computer networking. In J. Greeno, & Goldman, S. V. (Eds.), *Thinking practices in mathematics and science learning* (pp. 369–398). Lawrence Erlbaum Associates.
- Rodriguez, V. (2012). The teaching brain and the end of the empty vessel. *Mind, Brain, and Education*, 6(4), 177-185. <https://doi.org/10.1111/j.1751-228X.2012.01155.x>
- Scardamalia, M., & Bereiter, C. (2003). Knowledge building. In J. W. Guthrie (Ed.), *Encyclopedia of education* (2nd ed., pp. 1370–1373). Macmillan Reference.
- Shulman, L. S., & Sherin, M. G. (2004). Fostering communities of teachers as learners: Disciplinary perspectives. *Journal of Curriculum Studies*, 36(2), 135–140. <https://doi.org/10.1080/022027032000135049>
- Stein, M. K., Smith, M. S., & Silver, E. A. (1999). The development of professional developers: Learning to assist teachers in new settings in new ways. *Harvard Educational Review*, 69(3), 237–269. <https://doi.org/10.17763/haer.69.3.h2267130727v6878>
- Stenhouse, L. (1975). *An introduction to curriculum research and development*. Heinemann Educational Books.
- Stolle, E. P., Frambaugh-Kritzer, C., Freese, A., & Persson, A. (2019). Investigating critical friendship: Peeling back the layers. *Studying Teacher Education*, 15(1), 19-30, <https://doi.org/10.1080/17425964.2019.1580010>

- Swaffield, S. (2004). Critical friends: Supporting leadership, improving learning. *Improving Schools*, 7(3) 267-278. <https://doi.org/10.1177%2F1365480204049340>
- Swaffield, S. (2005). No sleeping partners: Relationships between head teachers and critical friends. *School Leadership and Management*, 25(1) 43 - 57. <https://doi.org/10.1080/1363243052000317082>
- Swaffield, S. (2007). Light touch critical friendship. *Improving Schools*, 10(3), 205-219. <https://doi.org/10.1177%2F1365480207077845>
- Swaffield, S. (2008). Critical friendship, dialogue and learning, in the context of leadership for learning. *School Leadership and Management*, 28(4), 323-336. <https://doi.org/10.1080/13632430802292191>
- Swaffield, S., & MacBeath, J. (2005). School self-evaluation and the role of a critical friend. *Cambridge Journal of Education*, 35(2) 239 - 252. <https://doi.org/10.1080/03057640500147037>
- Timperley, H., & Parr, J. M. (2004). *Using evidence in teaching practice: Implications for professional learning*. Hodder Moa Beckett.
- Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational Research Review*, 15, 17-40. <https://doi.org/10.1016/j.edurev.2015.04.002>
- Vo, L. T., & Mai Nguyen, H. T. (2010). Critical friends' group for EFL teacher professional development. *ELT Journal*, 64(2), 205-213. <https://doi.org/10.1093/elt/ccp025>
- Waters-Adams, S. (1994). Collaboration and action research: A cautionary tale. *Educational Action Research*, 2(2), 195-210. <https://doi.org/10.1080/0965079940020205>
- Watling, R., Hopkins, D., Harris, A. & Beresford, J. (1998) Between the devil and the deep blue sea? Implications for school and LEA development following an accelerated inspection programme. In L. Stoll & K. Myers (Eds.), *No quick fixes: Perspectives on schools in difficulty* (pp. 47–63). Falmer Press.
- Wennergren, A. C. (2016). Teachers as learners—with a little help from a critical friend. *Educational Action Research*, 24(2), 260–279. <https://doi.org/10.1080/09650792.2015.1058170>
- Wennergren, A. C., & Rönnerman, K. (2006). The relation between tools used in action research and the zone of proximal development. *Educational Action Research*, 14(4), 547-568. <https://doi.org/10.1080/09650790600975791>

- Wineburg, S., & Grossman, P. (1998). Creating a community of learners among high-school teachers. *Phi Delta Kappan*, 79(5), 350–354
- Winter, R. (2002). Truth or fiction: Problems of validity and authenticity in narratives of action research. *Educational Action Research*, 10(1), 143-154. <https://doi.org/10.1080/09650790200200178>
- Zeichner, K. M., & Noffke, S. E. (2001). Practitioner research. In V. Richardson (Ed.), *Handbook of research on teaching* (pp. 298–332). American Educational Research Association.