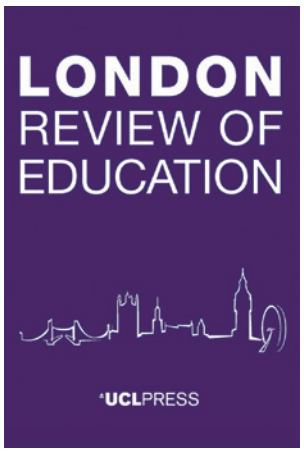

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Developing an empowering school curriculum: A renewed focus on action research

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Introduction

For those concerned with issues of equity and social justice in schools, differences in achievement and participation rates among students from different socio-economic groups pose a significant challenge. These differences persist despite having been a major focus for educational researchers over recent decades. Conventional approaches to research appear to have had little impact. This special feature aims to explore the potential of action research to challenge the exploitative nature of education and address the perceived de-professionalization of teachers (Ball, 2013) through involving them as collaborative partners rather than as the objects of research. This editorial combines an extended review of the literature that I consider relevant to the focus of the special feature, with brief introductions to the eleven papers at appropriate points in the literature review.

Action research involves practitioners carrying out a systematic and rigorous investigation of their own practice. It aims to develop a deeper understanding of theory-in-practice and to bring about positive social change for those involved in the research process. Action research methodologies have been underutilized in formal school educational settings and have tended to be carried out in informal settings or in underdeveloped countries where the exploitative nature of practice is more overt. It is most prevalent in the fields of health, for example, nursing and health promotion, and technology, for example, agriculture and environment (Thiollent, 2011). In their report commissioned by the British Educational Research Association (BERA), Wyse *et al.* (2018) highlighted the renewed interest in 'close-to-practice' research, including action research, for bringing about changes in classroom practice, while at the same time highlighting concerns over its quality. Practitioner research often lacks robustness in research design and transferability to contexts beyond those in which the practitioners are working.

This special feature aims to explore how action research can enable teachers and researchers to challenge the current situation in which students are disempowered by the exploitative nature of schooling and the curriculum (the tendency of schools to reproduce inequitable power relations within society is highlighted in the next section). It aims to demonstrate how action research can be of high quality, have significant impact on classroom practice in a formal school setting, and be conducted in a collaborative, participatory (Atweh, 2004), critical (Kemmis, 2009), robust, rigorous and 'trustworthy' (Lincoln and Guba, 2003) way.

Education is political

Deciding educational policy is essentially a political act dependent upon the outcomes of debates between those with different values and interests about what the 'good

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society' should look like. Education has both a reproductive and a transformative function, and there is always tension between the two: 'practical educational questions about what to teach and how to teach are always themselves a particular expression of more fundamental political questions about which existing patterns of social life ought to be reproduced or transformed' (Carr and Kemmis, 2009: 76).

The reproductive function of education

Education functions as a means of social reproduction and providing intergenerational continuity. It can be seen as 'the social process by which each new generation is initiated into the language, rituals, roles, relationships and routines which its members have to learn in order to become members of society' (Carr and Kemmis, 2009: 75). Bourdieu and Passeron (1990) argue that reproducing the social order from one generation to the next is one of the school's primary functions. It achieves this by concealing the unequal power relations that exist within the school and that systematically provide further advantage to children from privileged backgrounds, by recognizing and valuing their 'cultural capital' above that of others. Academic success is falsely attributed to notions of 'giftedness' or innate ability, justifying apparent large gaps in attainment between students (ibid.).

Bourdieu (1998) singles out mathematics as playing a principal role in enabling privileged groups to retain their position of dominance in society, and a closer examination of the discipline can help to understand the reproductive process of schooling. Teachers, students and parents commonly perceive mathematics ability as fixed rather than incremental, which explains the relatively high prevalence of 'setting' or 'tracking' within mathematics classrooms, where students are grouped according to prior attainment. Students are often assigned to groups on the basis of their behaviour, with limited opportunity for future movement between groups (Wilkinson and Penney, 2014). Since teachers tend to hold lower expectations of students from working-class backgrounds (Lerman and Zevenbergen, 2004), in terms of their behaviour and achievement, these students tend to be over-represented in lower sets. Since those placed in lower sets are more likely to receive 'a largely remedial (and boring) curriculum' (Hodgen and Marks, 2009: 31), this serves to perpetuate the strong correlation that exists between family income and students' mathematical attainment and participation (Boaler *et al.*, 2011; Noyes, 2009).

Since school mathematics acts as a 'critical filter', by providing greater access to higher education and better-paid employment (Black *et al.*, 2009), differences in mathematical attainment contribute significantly towards perpetuating inequities existing within society (Wright, 2017). Bourdieu and Passeron (1990) argue that such inequities are likely to be accepted by those in positions of power, since they, themselves, are more likely than others to have been successful under the existing school system. The restricted and disempowering mathematics curriculum experienced by so many students, particularly those from disadvantaged backgrounds, reflects the economy's need for 'an ever-growing army of low-skilled, compliant, docile, pleasant, obedient service workers' (Gutstein, 2006: 10).

The integrity of education is being undermined by the increasingly standardized and instrumentalized nature of schooling. A growing tendency among policymakers to prioritize the needs of the economy has led to a narrowing view of schooling in which educational aims and values are no longer open to discussion (Elliott, 2009; Noffke, 2009). The establishment of neo-liberal policies in education, resulting in increasing levels of performativity and accountability in schools, has led to the de-professionalization of teachers (Ball, 2013; Noffke, 2009).

The transformative function of education

Education can also function as a means of transforming society for the better by aiming to actualize some aspects of the 'good society'. A significant number of new entrants to the teaching profession articulate a 'humanistic vision' of education (Wright, 2017), which views education as a means of addressing current issues facing society, such as human rights, inequality, social justice and climate change (UNESCO, 2015). Freire's idea of 'teaching as praxis' offers a way of furthering these aims and emphasizes that 'teaching involves a dialectical relationship between critical theorizing and action' (Cochran-Smith and Lytle, 2009: 46). Praxis involves teachers acting on the basis of their ethical dispositions in applying theory to their practice: 'Understood as a species of *praxis*, "educational action" is thus a form of political action aimed at realizing the view of the good society to which the educational practitioner is tacitly committed' (Carr and Kemmis, 2009: 77).

Proponents of educational action research highlight the need to recognize the reproductive function of schooling while calling for 'educational responses to profound structural changes in society' (Noffke, 2009: 6). Such responses should avoid a dogmatic fixed notion of what constitutes the 'good society' and should instead reflect a 'democratic society committed to extending opportunities for all citizens collectively to shape the future of their society' (Carr and Kemmis, 2009: 77–8). Through the establishment of a communicative space based on Habermas's four principles of 'communicative action', namely inclusivity, equal rights to participate, exclusion of deception and absence of coercion, 'practitioners can participate in making decisions, taking action and collaboratively inquiring into their own practices, their understandings of these practices, and the conditions under which they practice' (ibid.: 79).

For education to become transformative, teachers striving to realize ideas of equity and social justice need to be actively involved in bringing about changes in classroom practice. In struggling to translate these aims into their day-to-day practice, they need to turn their classrooms into critical sites of inquiry and recognize existing practices of schooling as problematic. In this way, they can 'position themselves as lifelong learners, people who interrogate and enact inventive pedagogies that address the real learning needs of particular students that evolve over time' (Cochran-Smith and Lytle, 2009: 47). Creating such sites of dialogic inquiry resonates with the type of curriculum necessary for students to develop agency and responsibility for tackling future problems they will encounter in an increasingly complex and globalized world (Wells, 2009).

Problematizing educational research

In their review of research on gaps in educational attainment for children from different socio-economic groups, Reardon and Waldfogel (2016) found that educational inequalities are particularly large in the United States and the United Kingdom compared with other countries, and that they have grown substantially over the past 50 years. Despite a modest narrowing of the gap for some students in the UK in recent years, inequalities have not fallen for those with the highest levels of attainment. This is despite numerous studies by researchers into educational inequality, and recent government policies aimed at highlighting and reporting differences in attainment – for example, the introduction of the 'pupil premium' in 2011 in the UK, which targeted resources at schools with higher numbers of disadvantaged students. So why do conventional approaches to research appear to have had such minimal impact on addressing inequality over the past 50 years?

The sociopolitical nature of educational research

A primary problem with much educational research is that it fails to take account of the sociopolitical nature of education and schooling. Researchers who claim to be objective and free from bias are merely denying the ideologies and power relationships that permeate the field (Valero, 2004). Failing to recognize social class as an issue undermines the potential of research to address inequalities in educational outcomes (Jorgensen, 2016).

Many researchers have adopted a positivist stance to educational research, striving to eliminate bias in the hope of discovering the objective truth, while arguing that promoting a political cause undermines the primary goal of research in generating knowledge (Hammersley and Gomm, 1997). The recent prioritization of funding by the UK government for randomized control trials, through the Education Endowment Fund and the National College for Teaching and Leadership, demonstrates the continued privileging of research claiming to be value-free and objective (BERA, 2014). Research that does address the sociopolitical nature of education, such as that relating to setting, is often ignored by policymakers. Setting has grown substantially in recent years in England, with the tacit approval of the UK government, despite a wealth of research evidence demonstrating that it has no significant effect on overall attainment and a negative impact on the achievement of lower-attaining students (Francis *et al.*, 2017).

The notion that educational research can be neutral, and that the researcher can play an impartial role, is rejected by many qualitative researchers, such as Denzin and Lincoln (2008: 29), who argue that 'There are no objective observations, only observations socially situated in the worlds of – and between – the observer and the observed'. Some researchers propose 'authenticity' and 'trustworthiness' as alternatives to the positivist notion of 'validity' in demonstrating how qualitative research can be rigorous without necessarily being value free (Lincoln and Guba, 2003). Advocates of action research accept its partiality, arguing that it 'rejects the notion of an objective, value-free approach to knowledge generation in favor of an explicitly political, socially engaged, and democratic practice' (Brydon-Miller *et al.*, 2003: 13). They would argue that the nature of schooling, with its dual reproductive and transformative functions, implies that all educational research is necessarily political: 'nobody "studies" or "researches" education without taking some stance towards its political purposes and goals' (Carr and Kemmis, 2009: 83). Research should not be considered apolitical merely because the political purpose is not articulated. Indeed, research that claims to be neutral and value-free merely serves to reaffirm the reproductive function of education and ignores its potential to transform.

Constraints and challenges facing classroom practitioners

Some researchers argue that much conventional educational research has little impact on classroom practice because it ignores teachers' perspectives, classroom contexts, situations and contingencies that arise (Bishop, 1998). New policy initiatives commonly involve disseminating predetermined findings from research that ignore everyday problems faced by teachers and that are not practically valid:

> The complexity of these problems is such that they defy many of the solutions proposed by conventional research carried out in accordance with the strictest methodological canons. Such research may secure publication in prestigious academic journals, but it is unlikely to support teachers to make worthwhile educational change in their classrooms and schools. (Elliott, 2009: 37)

Conventional research tends to draw an artificial distinction between universal theory or knowledge and situational understanding or practical wisdom (ibid.). More collaborative research needs to be conducted with teachers, making use of their tacit knowledge to promote 'commonsense theorizing', enabling them to 'develop and test a common stock of shared understandings about how to realize worthwhile educational ends' (ibid.: 37). The 'collective engagement of teachers in researching their practice' (ibid.: 31) is vital for learning from context-dependent inquiry and developing educational theory based on shared practical understanding.

Teachers' engagement with research

There has been growing concern in recent years about the limited extent to which teachers engage with research evidence. This has been blamed on the poor quality and lack of relevance of educational research, its inaccessibility to practitioners (Gough, 2004), the pressure on teachers' time, a lack of skills in accessing research, and teachers' strongly embedded beliefs and cultures (Sebba, 2004). These concerns gave rise to the 'evidence-based practice' movement, which promoted randomized control trials and systematic reviews with the aim of encouraging teachers to incorporate the findings into their classroom practice (Oakley, 2006).

Critics of evidence-based practice claim that it undermines teachers' professionalism by requiring them to implement recommendations for changes to practice without questioning or fully understanding the research from which these recommendations are derived. They highlight how its introduction was accompanied by increasing political demands for 'public accountability' in schools, and the consequent adoption of management practices from the private sector, for example, requiring teachers to implement research findings as performance management targets (Hammersley, 2004). Teachers' reluctance to engage with research evidence can therefore be attributed to a scepticism for new initiatives, often seen as a tacit way of monitoring performance or associated with political agendas (Thomas, 2004).

Where teachers are involved in research, this is normally limited, for example, to consultation over research questions. Their contributions are commonly overlooked in reports and publications written by university-based researchers (ibid.), and their voices, along with those of students, are often marginalized and confined to 'sound bites that sit neatly in the researcher's preferred story' (Cotton, 2009: 1). Teachers are rarely given the opportunity to fully participate in research, thus missing out on the benefits of engaging both 'in' research as a 'social practice', and 'with' research as a 'body of knowledge' (Leat *et al.*, 2014). Teachers report how engaging in research enables them to reconnect with beliefs and values that they may have lost sight of due to the demands of the profession (Wright, 2016). An alternative mode of 'teacher research' is derived from a critique of 'teacher as technician, consumer, receiver, transmitter, and implementer of other people's knowledge' (Cochran-Smith and Lytle, 2009: 42) and repositions teachers as knowers and agents in 'working the dialectic', that is, the 'reciprocal, recursive, and symbiotic relationships of research and practice, analysis and action, inquiry and experience, theorizing and doing, conceptual and empirical scholarship, and being researchers as well as practitioners' (ibid.: 43).

A critical perspective on educational research

Given the political nature of education, research is unlikely to have a transformational effect on practice if it does not challenge the underlying values, assumptions and beliefs of teachers. Educational research is too often focused on school effectiveness,

ignoring questions about the purpose of the curriculum and approaches to teaching (Leat *et al.*, 2014). An over-reliance on 'what works' protocols can undermine teachers' capacity to reflect critically on existing practice in relation to research evidence (Winch *et al.*, 2013). Teachers engaging in collaborative inquiry, facilitated by external experts and promoting dialogue and peer support, is important for encouraging risk-taking and exploring why things work and in which contexts (Cordingley, 2013).

The idea of 'communities of practice' is becoming increasingly popular in researching the professional development of teachers, although the 'apprenticeship' model (Wenger, 1998) is considered more applicable to non-school contexts in which teaching is not considered essential for learning to take place (Graven and Lerman, 2003). The process of 'alignment', characterized by 'individual members aligning themselves with conditions or characteristics of the practice' (Jaworski, 2006: 190), can also perpetuate the 'normal desirable state', in which norms and routines are established simply to avoid disagreement and conflict. Daly *et al.* (this issue) pose a challenge to those advocating action research by highlighting its potential to be appropriated by policymakers to reinforce a school system dominated by accountability and performativity measures. They advocate a 'dialogic framework' for supporting teachers in engaging in action research that offers 'disruptive practice' and is true to its emancipatory traditions.

Conversely, 'communities of inquiry' seek to achieve 'critical alignment', characterized by 'teachers critiquing and trying to develop, improve or enhance the status quo, alongside enculturation into existing social norms' (Jaworski, 2006: 191). External stimulus, such as that provided by a university-based researcher, is seen as essential for establishing communities of inquiry that foster the development of teachers' critical understanding of, and agency in challenging, existing practice. External partners also play a vital role in facilitating 'networked learning communities', involving teachers from a number of different schools, by providing access to research, theory and practice that is not constrained by institutional parameters (Jackson and Temperley, 2007). Owen and Davies (this issue) report how a team of university-based researchers acted as a 'critical friend' in using action research to empower teachers (or 'educators' as they are known) in a Montessori school in Western Australia, through aligning an externally enforced reform with their own alternative practices and philosophy.

An 'inquiry stance' involves teachers working collaboratively to interrogate theory and the research findings of others, and to theorize their own practice and generate knowledge. It acknowledges the sociopolitical nature of educational research and involves 'making problematic the current arrangements of schooling, the ways knowledge is constructed, evaluated, and used, and teachers' individual and collective roles in bringing about change' (Cochran-Smith and Lytle, 2009: 45). It involves questioning assumptions about curriculum and assessment, and the extent to which the larger agendas of the school reflect the need for social change. It is guided by the following questions: 'Who am I as a teacher? What am I assuming about this child, this group, this community? What sense are my students making of what's going on in the classroom?' (ibid.: 45).

The case for educational action research

There has been growing interest recently in 'close-to-practice' research (Wyse *et al.*, 2018), which involves teachers and researchers working together to address problems identified in practice. Such research is generally acknowledged to have significant potential for impacting on teachers' professional learning and for challenging

existing practice (Myhill, 2015). While much practitioner-led research is claimed to be collaborative, it often neglects to theorize exactly what this 'collaboration' involves (Robutti *et al.*, 2016). Several of the articles in this special feature theorize and articulate clearly what collaboration looks like in the context of action research, including Godfrey's (this issue) advocacy of 'collaborative peer enquiry' as an empowering model for school improvement and leadership development in the formal school setting. Dudley *et al*. (this issue) report on how 60 schools in an inner-city London borough made use of collaborative action research and lesson study in initiating a 'bottom-up' approach to reform and professional development. One of the biggest challenges facing close-to-practice research is a common perception that it is limited in scale and lacks rigour (Wyse *et al.*, 2018). Action research is recognized as one of the most well-established forms of close-to-practice research, and its growing popularity is reflected in increasing numbers of academic publications and research groups established in schools and universities (Noffke, 2009).

What constitutes action research?

It is not always clear what constitutes action research, and much of the time, in academic journals, this depends on whether the authors of the report describe their approach as 'action research'. For example, the authors of the BERA Close-to-Practice Research Project do not make clear what the inclusion criteria were for 'action research' projects in their review, other than to specify at least two 'action research' cycles (Wyse *et al.*, 2018). There are numerous characterizations of different forms of action research, for example, 'collaborative action research', 'participatory action research', 'emancipatory action research' and 'critical action research'. However, these should be considered as placing different emphases on the research design, rather than adopting fundamentally different approaches. Most proponents of action research would argue that it should embrace all the characteristics described above – that is, it should be collaborative, participatory, emancipatory and critical (Atweh, 2004).

Action research is certainly recursive in nature and involves 'a continuous process of problem posing, data gathering, analysis, and action' aimed at 'altering curriculum, challenging common school practices, and working for social change' (Cochran-Smith and Lytle, 2009: 40). It should be considered primarily as a methodology, rather than a collection of methods, and it requires going 'beyond definitional struggles toward thinking about action research as embodied in many forms and looking toward more just educational practice' (Noffke, 2009: 21). There are three essential dimensions to action research. The 'personal' dimension involves teachers participating in and learning about the knowledge-generating process. The 'professional' dimension reflects how teachers' engagement in systematic inquiry, data collection and evaluation of practice leads to improvements in the quality of teaching and learning. The 'political' dimension necessitates action that produces knowledge leading to an improvement in the lives of students. Hence, one of the central aims of action research must be the enhancement of economic and social justice (Noffke, 2009).

Practitioner-led research is not uncommon in schools (Wyse *et al.*, 2018). However, much of what is often claimed as 'action research' is, in reality, either overly 'technical', involving improving practice by achieving predetermined outcomes, or too 'practical', with teachers being left to decide the focus but involving little questioning of the legitimacy of existing practice (Kemmis, 2009). Neither 'technical' nor 'practical' approaches should be considered as 'action research' according to the methodology described above. It is a myth to claim that action research can be anything other than political, and the claim of 'technical action research' to be politically neutral calls into

question its validity (Carr and Kemmis, 2009): 'Action research, unproblematized in terms of its goals, can act to reinscribe existing practice rather than create new forms which focus on social justice' (Noffke, 2009: 20).

Benefits of action research

Dimensional analysis (Noffke, 2009) provides a useful framework for highlighting the benefits of action research. The 'personal' dimension is apparent in the potential gain to be made by teachers in participating in action research, which satisfies commonly accepted criteria for the effective professional learning of teachers (Geiger *et al.*, 2016). These include teachers engaging over a sustained period, carrying out inquiries within their own classroom environments and reflecting critically on their own practice. The participatory and collaborative aspects of action research require researchers to work 'with' teachers, as 'partners', rather than carrying out research 'on' teachers, as 'objects', which is more common with conventional research (Skovsmose and Borba, 2004). Such approaches resonate with Freire's concept of 'conscientization' of research participants and enable teachers to develop a 'more profound understanding of the situation' (Reason, 1994: 328). Teacher educators are particularly well placed to facilitate collaborative research in schools by taking advantage of their dual roles as 'insiders' and 'outsiders' (Starkey *et al.*, 2014).

The 'understanding of theory-in-practice' (Torrance, 2004: 199) developed through collaboration between those involved in action research offers teachers a genuine opportunity to engage meaningfully with research, rather than the limited opportunity provided by 'evidence-based practice', whereby teachers implement unquestioningly others' research findings. In developing a deeper understanding of their own situation and the pressures they face, action research can help teachers to more successfully navigate constraints on their practice, re-engage with the humanistic vision they may have lost sight of during their teaching career and become more comfortable in their teaching role (Wright, 2016). Vaughan (this issue) highlights the potential benefits of teachers engaging in action research for increasing their agency and self-efficacy within an education system dominated by discourses of accountability and performativity.

The 'professional' dimension of action research is evident in the knowledge it generates, which has greater relevance to other practitioners and is more applicable to other classroom situations (Brydon-Miller *et al.*, 2003). Action research achieves this by paying closer attention than conventional research to the constraints and challenges faced by teachers, and the opportunities they are afforded, on a day-to-day basis. It values teachers' in-depth knowledge of the classroom situation and recognizes how researchers and teachers both have essential, yet distinct, roles to play in the research process (Atweh, 2004).

The collaboration between researchers and teachers enables insight to be generated from both perspectives, and the reporting of teachers' evaluations of their own practice is more likely to be seen as credible and inspiring by other practitioners (Wells, 2009). Teachers' situational understanding and practical wisdom can contribute towards generating theory through suggesting actions that are possible in other situations. Through 'sharing and developing their practical insights into the problems and dilemmas of realizing their educational values in concrete teaching situations', teachers can help generate 'useful summaries of the universal significance of insights and judgements to guide further reflection and action' (Elliott, 2009: 35). Guerrero-Hernández and Fernández-Ugalde (this issue) highlight the benefits of teachers

engaging in the generation of knowledge through establishing 'research–practice partnerships' between schools and a public university in Chile.

'All forms of action research embody a political dimension' (Noffke, 2009: 8), and questions giving rise to action research cannot emanate from theory or practice in isolation, but rather 'from critical reflection of the intersection of the two' (Cochran-Smith and Lytle, 2009: 41). In seeking to challenge social inequity through transforming classroom practice, action research must take account of the reproductive tendencies of schooling and how these relate to the constraints faced by teachers. It must therefore reject the possibility of remaining objective and value-free. The critical and emancipatory aspects of action research must be emphasized through adopting 'a systematic approach to personal, organizational, and structural transformation, and an intentionally and transparently political endeavour that places human self-determination, the development of critical consciousness, and positive social change as central goals of social science research' (Brydon-Miller and Maguire, 2009: 80). McNiff's (this issue) philosophical paper calls for action researchers to engage with epistemic injustices and to challenge the dominant view of curriculum as a body of knowledge to be transmitted to learners. She calls for a renewed focus on establishing an inclusive and democratic curriculum through an unbounded approach to politically oriented action research.

Some issues facing educational action researchers

As mentioned in the previous section, a significant challenge for educational action research is the perception of it as lacking rigour and being under-theorized and limited in scale. While what is claimed to be 'action research' may be growing in popularity, it frequently lacks the collaborative, participatory, emancipatory and critical characteristics necessary to address the underlying causes of inequality. An action research methodology that fully recognizes the reproductive function of schooling and actively pursues social justice for marginalized and exploited learners remains under-exploited as a research methodology in the field of education (Brydon-Miller and Maguire, 2009).

Rigour of educational action research and trustworthiness of findings

Care must be taken to ensure the rigour of educational action research without losing sight of its methodological nature by reducing it to a collection of methods and procedures. The 'critical research model' of action research aims to achieve this through the careful consideration of three underlying 'key processes' (Skovsmose and Borba, 2004). The first key process, 'pedagogical imagination', involves developing a critical understanding of the 'current situation' (that is, existing practice) and articulating an 'imagined situation' (that is, alternative vision) by drawing on previous research findings and teachers' situational knowledge and practical wisdom. The second key process, 'practical organization', requires researchers, teachers and other participants (for example, students) to cooperate in organizing an 'arranged situation', in which some aspects of the 'imagined situation' are tried out, taking into account the constraints of the 'current situation'. The third key process, 'explorative reasoning', involves evaluating the success of the 'arranged situation' in order to deepen understanding of the 'current situation' and to reflect on the feasibility of the 'imagined situation'.

This 'critical research model' formed the basis of the research design for the Teaching Mathematics for Social Justice Research Project that I conducted collaboratively with five teacher-researchers as part of my doctoral studies

(Wright, 2020). The project demonstrated how the three key processes associated with the 'critical research model' enable action research to be conducted in a systematic and rigorous way that promotes critical reflection on, and facilitates transformations in, existing classroom practice. The project's findings highlighted the importance of establishing a genuine partnership between academic and teacher researchers based on mutual respect and the recognition of each other's expertise and contributions. The project illustrated the careful balance that needs to be maintained between the academic researcher's role of providing the external stimulus necessary to promote critical reflection and the agency of the teacher-researchers in playing a leading role in the design and development of the research project (Wright, 2020).

It was highlighted earlier how external stimulus is considered vital in promoting critical reflection, which involves teachers viewing existing practice as problematic and questioning its validity in relation to cultural, historical and political values and beliefs (Hatton and Smith, 1995; Liu, 2015). Without critical reflection, collaborative inquiry is likely to perpetuate existing practice through alignment with accepted norms (Jaworski, 2006). The role of the researcher is therefore pivotal in ensuring that action research becomes critical, that is, it involves teachers and researchers working together to 'change their social world collectively, by thinking about it differently, acting differently, and relating to one another differently' (Kemmis, 2009: 471).

The Teaching Mathematics for Social Justice Research Project (Wright, 2020) also drew on Lincoln and Guba's (2003) framework for ensuring the 'trustworthiness' of qualitative research findings. This framework serves as a useful alternative to the more positivist notion of 'validity' in establishing the reliability of the research findings. The four aspects of the framework were found to be useful in conducting the action research project in a systematic and rigorous way (Wright, 2020). Consideration of the 'credibility' of the research findings, by ensuring the phenomena being explored are represented accurately, led to an iterative process in which data analysis was ongoing, and methods and early findings were shared with teacher-researchers to generate richer meaning. The notion of 'confirmability', which involves ensuring that the findings are generated from researchers' experiences rather than from their preconceived ideas, informed the use of research journals to stimulate reflexivity and critical reflection among both academics and teacher-researchers. The research journals, along with audio recordings that captured discussions during research group meetings, enabled the reporting of the study to include rich descriptions of the research context and design. These rich descriptions were prompted by the concepts of 'transferability' and 'dependability', which highlight the need to provide sufficient information in reports of the study to enable readers to judge the relevance of the research findings to their own situations, and to inform any similar or related study that they might wish to conduct themselves (Lincoln and Guba, 2003; Wright, 2020).

The notion of 'transferability' can be used as an alternative to the term 'generalizability', which poses significant problems for action research methodology (Lincoln and Guba, 2003). Unwarranted distinctions made between theory and practice in conventional research lead many to assume that it is not possible to generalize from the findings of action research projects (Elliott, 2009). The claim that generalizations are only possible from cases of action research by identifying contexts they have in common is an oversimplification: 'case studies cannot yield general rules, but when constructed in action situations they are the means by which universal rules are both tested and developed' (Elliott, 2009: 34). Thus, action research has an important role to play in the development of theory, and reports of studies need to focus on how educational values can be realized in action (through 'educational praxis'). Teachers involved in practitioner inquiry have an important contribution to make towards the generation

of knowledge (Cochran-Smith and Lytle, 2009). The challenge for educational action researchers is finding ways to make this knowledge explicit and to open it up to critique by the wider community in order to develop theory. Chand *et al.* (this issue) explore the development of policy contexts that can facilitate and disseminate collaborative action research studies and methodology on a wider scale. They draw on their experiences of recognizing and sharing the findings from teacher-driven innovations through organizing a series of 'Educational Innovation Fairs' across India.

Navigating institutional constraints faced by educational action researchers

One of the biggest challenges facing educational action researchers is the amount of time required to ensure the research is conducted in a collaborative, participatory, emancipatory and critical way (Wright, 2020). This is the case for teacher-researchers, who face growing pressure on their time due to the ever-increasing levels of performativity and accountability in schools (Torrance, 2004; Ball, 2013). It is also the case for academic researchers, who face increasing pressures to perform by publishing high-quality research outputs while coping with more demanding teaching workloads (Wyse, 2020). Having time to devote to educational action research depends on the securing of research funding, which is particularly difficult given the recent squeezing of research funding for education and social sciences in comparison to natural sciences (Wyse, 2020) and prioritization given to funding randomized control trials (BERA, 2014).

The very nature of action research means that it is messier and more difficult to manage than other forms of research (Smith *et al.*, 2010). The collaborative and participatory characteristics of action research mean that the research design must remain open to negotiation and agreement and cannot be finalized in advance. The inevitable unpredictability of the research adds to the difficulty in receiving funding, as most grant applications require research methods and timescales to be predetermined and outlined in detail. Similar expectations from universities in approving applications for ethical review place an additional hurdle in the way of academic researchers wishing to conduct action research with teachers. The sharing of responsibility for the development of an action research project also poses the risk that the researcher's analysis of the situation might be rejected by others, or that raising levels of consciousness of teachers might lead to expectations that cannot be met or to conflict with school management (Todhunter, 2001).

Lesson study and educational action research

One collaborative research approach that has grown in popularity in recent years is lesson study, which involves planning, teaching, observing and evaluating a lesson, focusing on a research question arising from classroom practice. Lesson study has been practised as a traditional feature of education in Japan and other East Asian countries for more than a hundred years, although it has grown organically through the collaborative practice of teachers and largely remained untheorized. It has only recently begun to attract the attention of researchers in the UK, the US and the rest of the world, most likely due to the relatively high ranking of many East Asian countries in international comparisons of academic performance, particularly in mathematics (Lewis *et al.*, 2009; Takahashi and McDougal, 2016).

Various models of lesson study have evolved with a greater focus on researching practice. These models put greater emphasis on using research methods to collect data and reflect on practice in a systematic way (Lewis *et al.*, 2009). They incorporate other aspects of effective professional learning for teachers, including being research-

informed, sustained over a long period, involving collaborative teams and using evidence from observations to evaluate practice (Wake *et al.*, 2016). As with action research, the role played by external experts is seen as pivotal, and the success of a lesson study is highly dependent on 'their capacity to bring important intellectual resources without undermining the fundamentally teacher-led characteristics of the process' (Lewis *et al.*, 2009: 152).

There is some debate about the extent to which lesson study shares a political dimension with action research. Japanese lesson study, for example, is associated with the implementation of a problem-solving approach to teaching mathematics around which there is already large-scale consensus (Takahashi and McDougal, 2016). Lesson study is a model of action research that, while foregrounding the professional dimension, can also be political (Noffke, 2009). It can promote personal and professional development through generating individual and collective knowledge and bringing about improvements in teaching and learning. Lesson study can also raise questions about the purpose and nature of teaching, and, in this regard, action research can provide a useful theoretical base on which to build a political dimension (Lewis *et al.*, 2009). Wake and Seleznyov (this issue) establish lesson study as firmly situated within an action research paradigm. They theorize the research processes integral to Japanese lesson study, which are sometimes lost through its transformation into lesson study models in other educational contexts, including England.

Student participation and voice

Students in the UK and the US are often involved in the decision-making processes of schools, for example through occasional consultations and school councils. However, this 'official student voice' is often limited to a minority of students, who are selected from those whose voice is seen as compatible with the school's aims, and it is restricted to making relatively trivial decisions. The main aim of this exercise appears to be to help students gain an appreciation of democratic processes and allow some students (those considered to be more suited to leadership) to develop their skills of negotiation, teamwork, empathy and decision making. Surveys of student satisfaction are normally used only for auditing purposes, and little opportunity is provided for students to have a meaningful say in their own education, the nature of curriculum or the development of possible alternatives (Thomson and Gunter, 2009).

Some argue that schools need to go much further towards engaging with student voice by involving students as participants in, rather than objects of, research. This appears to be a natural extension of the action research methodology to include students, as well as teachers, as research partners. It recognizes students' moral right to have a say in decisions affecting them, and the school's obligation towards establishing a democratic community. The participation of students can support the reform process by drawing on a wider range of perspectives to generate important insight into change that is needed and to challenge taken-for-granted practices and unexamined beliefs. It can also secure higher levels of support from students in implementing reforms by giving them a greater sense of ownership over the reforms (ibid.). Two papers in this special feature consider the benefits and challenges of involving students as research participants. Edwards and Brown (this issue) draw on their experiences of a project in which the 'uncomfortable' findings were ignored and challenged by one head teacher as they fell outside her professional frame of reference. They consider implications for including student voice and participation in future action research projects. McMullan and Sutherland (this issue) report on an action research project that partially achieved its aims of developing students' reading self-concept and confidence through involving

them as co-researchers. However, they also highlight barriers they encountered through students' own internalized discourses and anxieties around performativity and high-stakes testing.

There are various constraints facing researchers wishing to engage students as co-researchers. Some would question whether it is possible to gain genuinely free and informed consent from students, given the imbalances in power relations existing between young people and adult teachers/researchers in schools. 'Pedagogical research', which combines research and pedagogic processes, aims to address these constraints by facilitating 'young people articulating their experiences, feelings, attitudes and political opinions' (Starkey *et al*., 2014: 429). Research from a 'student standpoint', which addresses issues students consider important, engages with their experiences and allows all voices to be heard, has greater potential to bring about changes in practice and to interrupt existing power relations: 'Young people are generally disenfranchised in their schooling, and student participation projects are one way of beginning to disrupt the intergenerational power relations embedded and embodied in every aspect of schools' (Thomson and Gunter, 2009: 418). However, students do not necessarily speak with a single voice and, for research to be genuinely participatory, student researchers need to be encouraged to represent the views and perspectives of all students, rather than merely presenting their own opinions.

Notes on the editor

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Articles in this *London Review of Education* special feature

This special feature aims to generate further insight for academic and teacher researchers into how they can facilitate systematic and rigorous forms of action research, in a formal school setting, that are genuinely collaborative, participatory, critical and emancipatory. Each of the eleven articles, as highlighted in the above review of the research literature, makes a valuable contribution to the aims of this special feature.

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