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Collaborative professional inquiry: A powerful driver for teachers' development of research-informed practice

Summary

This paper proposes 'collaborative professional inquiry' as the fundamental approach to effective professional development for teachers that supports the development of research-informed practice in schools. Teachers' professional inquiry is considered as a collaborative endeavour borrowing from practitioner research, for example in terms of an action research design, focusing on lesson study, ethical controls to build trust, data generation and analysis, and dissemination. A rationale for professional inquiry includes the value it places on teachers' practical wisdom, the way that it develops teachers' epistemic insight in drawing on different sources of knowledge, how it builds teachers research literacy, and manages this within a realistic and sustainable workload. In contrast to previous proposals that tend to position teachers as consumers of knowledge within the field of education research, this proposal for professional inquiry positions teachers as producers of knowledge within the field of education.

Keywords: teachers, professional learning, professional development, research-informed, evidence-based

Introduction

In this paper I will argue that the learning and development of qualified and experienced teachers can be powerfully supported through engagement in collaborative professional inquiry. By professional inquiry I mean a sophisticated form of collaborative self-evaluation of the impact of teaching by teacher researchers to underpin the development of research-informed teaching. This professional inquiry borrows from action research and lesson study approaches but is more pragmatic,

more realistic and practicable in terms of workload commitment, than engagement in a full practitioner research project. So, while small-scale practitioner research and involvement in large-scale research projects might be a useful activity at points within a teacher's career, it is professional inquiry that can powerfully and regularly support their sustained professional learning and development.

Experienced and successful qualified schoolteachers have developed valuable expert knowledge underpinning their decisions on what and how to teach. It is useful to refer to this knowledge as 'teachers' practical wisdom' because that label foregrounds the situated, contextually robust, and applied nature of this knowledge. These expert teachers have useful knowledge of their school, their students, their curriculum subject, and the local community, that informs their professional judgments. But just observing experienced teachers in classrooms, or listening to them evaluate the impact of their teaching, will quickly demonstrate to an education scholar that teachers' practical wisdom is entangled with relevant 'public knowledge', meaning the education literature including theory, research findings, and scholarly professional guidance (for example: Boyd & Bloxham, 2014). The widely used metaphor of a 'gap' between research and practice is persuasive but misleading. Teachers' practical wisdom and public knowledge (theory and research within the literature) are more usefully viewed as two entangled domains of knowledge with teachers' professional learning as an interplay, a power struggle, between the two domains (Boyd & Bloxham, 2014; Boyd, Hymer, & Lockney, 2015). I will argue that high quality professional inquiry enables and supports 'interplay' between these two different but entangled sources of knowledge.

In adopting and proposing the term 'professional inquiry' it is important for us to acknowledge the contested definition of 'professionalism' and the need to move from professionalism as 'demanded' or 'prescribed' to professionalism as 'enacted' by teachers and seen in daily practice (Evans, 2008). I use the concept of professional to mean 'a teacher who has some degree of autonomy and agency and is a curriculum-maker'. This contrasts with a view of the teacher as a technician who delivers the curriculum using evidence-based practice and is one reason why I do not favour the term 'practitioner'. But this is not to propose a dichotomy between professional and technician, there are no doubt aspects of becoming and being a teacher that are routine and might be developed through practical training. However, using the term professional insists that being an effective teacher requires professional judgment because it is complex, values-based, relational and underpinned by engagement with different sources of knowledge.

In adopting the term 'professional inquiry' it is also important to consider why the more formal term 'inquiry' might be preferred to the term 'enquiry' (Boyd & White, 2018). This deliberate choice of terminology happily coincides with

American spelling but in traditional English language it is also an option, and the choice of using the 'i' form usefully emphasises a more formal questioning of practice and of the literature. This is to distinguish professional inquiry from the kind of widespread reflective learning that asks the question 'what works here' but is focused primarily on teachers' practical wisdom and not effectively informed by collaborative engagement with relevant literature, development of a research question, classroom experimentation, generation of rich data and analysis, and sharing findings with peers (Arendt et al., 2025). The combined choice of 'professional inquiry' also avoids the term 'practitioner' which unfortunately within the world of educational research has been positioned, using terms of practitioner enquiry and practitioner research, as a form of second-rate activity that is not quite real or professional research. High quality professional inquiry involves advanced scholarship but is a positive and powerful activity that can drive the development of research-informed practice in schools. To consider professional inquiry as a form of 'scholarship' then it should include dissemination to peers, being available for peer review, and with sufficient detail for others to understand the project, and even to reconstruct it within their own settings (Shulman, 2005).

A signature pedagogy for teacher education

Different forms of inquiry, from relatively weak reflective enquiry learning cycles through to full engagement in practitioner research, have been a strong characteristic of initial teacher education and continuing professional development for qualified teachers. The approaches of lesson study and action research have been particularly significant in shaping this nascent 'signature pedagogy' of teacher education and development. The influential work of Lawrence Stenhouse proposed the term 'teacher researcher' (1975). But arguably the definition of 'researcher', and of 'high quality research', and most significantly of 'teachers' research literacy', has mostly been developed by education research associations and higher education policies such as research audit.

Teachers' research literacy, as defined by research associations and perhaps by professional researchers, tends to be defined as a technical literacy with an emphasis on reading research, on critical understanding of methodologies, and on being able to 'do' research (BERA, 2014). This perspective tends to position the majority of teachers as consumers rather than also as producers of knowledge. An alternative to such "scientific content approaches" (Phillips, Eriksen, & Mausethagen, 2023, p. 2) is to foreground the judicious application of research in real world local school contexts informed by teachers' situated practical wisdom and

professional judgment (Boyd, 2022a). For the professional teacher: "…research must be judiciously applied, in line with ethical demands and role obligations. It needs to be integrated with other knowledge resources, including relational and experience-based knowledge" (Phillips, Eriksen, & Mausethagen, 2023, p. 2). These alternative definitions of teachers' research literacy position it as a social phenomenon involving professional judgment and they tend to place much more value on teachers' practical wisdom. This in turn has implications for the professional status of teachers within their schools as workplaces and within a wider socio-economic framework. Eriksen argues that research evidence alone, without practical wisdom, does not have sufficient breadth to lead to practical conclusions (2022). And that professionals must go beyond generic framing to ask, 'is it appropriate?' within this setting? In developing research-informed practice he argues for a values-based, collaborative and situated approach.

Although in this paper we will focus particularly on professional inquiry by qualified and experienced teachers, it is also important to consider initial teacher education. From the perspective proposed in this paper the focus of initial teacher education should be to introduce and build a capacity for professional inquiry in pre-service teachers. Especially on short initial teacher education programmes, for example one-year postgraduate courses, pre-service teachers are understandably largely focused on survival, what works, and fitting in with the accepted practice in their placement schools. But there is still some scope for building pre-service teachers' understanding and capacity for professional inquiry. Learning to teach can be viewed as a process of enquiry with a key process of beginning teachers engaging in collaborative dialogue as they share their evaluations of lessons they have taught (Oyler, 2006). Such professional discussion needs to be skilfully facilitated if it is to drive professional learning (Jenset, Hammerness, & Klette, 2019). It is important to consider what sources of knowledge such beginning teachers are drawing on to help understand the problems they need to resolve within their classroom practice. If they are to do more than merely survive initial teacher education, then it is also important for them to go beyond 'what works' and understand why. There has arguably been too much use of weak 'reflection' models that encourage beginning teachers to only refer to practical wisdom rather than also engage with education literature that provides access to theory, research evidence and scholarly professional guidance. A useful concept of 'practical theorising' has been developed by teacher educators largely based at Oxford University (Hagger & McIntyre, 2006). With beginning teachers in mind, the concept of practical theorising captures the ability to learn through enquiry by critically engaging with both situated teachers' practical wisdom and relevant educational literature (Burn, Mutton, & Thompson,

2022). This perspective aims to develop beginning teachers able to continue their professional learning and development in varied work settings and contexts.

An influential review of research into effective professional development for qualified and experienced teachers identified that a strong focus on pupil outcomes was crucial and that teachers participating in a project, as volunteers or conscripts, needed to develop a shared sense of purpose around that (Cordingley et al., 2015). This review also found that sustained engagement in a project, for example for one academic year, with a 'rhythm' to the activities that allows time for classroom experimentation is most effective. Teachers need to gain an understanding of the rationale underpinning a strategy, use that to refine practice, and develop a practical theory for the teaching and learning activities involved (Cordingley et al., 2015). The review stressed that focusing on generic pedagogic strategies was less effective and in relation to providers of effective professional development, the review highlighted the role of external facilitators acting as coaches and/or mentors and treated them as peers and co-learners. Part of the role of the mentor is to broker teachers' critical engagement with external knowledge, the relevant literature. For effective professional development collaboration between teachers was found to be essential, but it was insufficient without leadership involving brokering of new relevant external knowledge. Well-designed professional inquiry has the potential to meet all of the characteristics of effective professional development identified in this significant review (Cordingley et al., 2015).

The key features of professional inquiry

Professional inquiry is positioned far beyond the kind of crude and simplistic top-down evaluation and performativity of teachers often adopted by school managers influenced by accountability processes such as school inspection. Professional inquiry borrows from practitioner research approaches but aims to be more practicable, more fully owned by teacher researchers, and less onerous in terms of workload. Ten steps for professional inquiry have been set out to include (adapted from Boyd & White, 2017, pp.130–131):

1. Identify a focus and develop a research question: Even a top-down issue is shaped by teacher researchers as they develop a research question.
2. Collaborate: Engagement by teachers is voluntary or at least builds shared ownership of the project, and others, especially learners, are invited.
3. Engage with relevant literature: Critical engagement with theory, research and scholarly professional guidance.

4. Develop an approach and inquiry design: A critical inquiry stance begins to question practical wisdom and established ways of working including in relation to purposes of education, social justice issues, and leadership.
5. Establish an ethical framework: professional ethics, dialogic sharing of practice, and a supportive workplace culture, can create good levels of trust.
6. Generate data: a focus on classroom lessons, student voice, existing evidence of learning, observation or classroom video, and teacher researcher evaluation.
7. Analyse data systematically: Some use of systematic qualitative data analysis based on research methods, often a form of thematic analysis.
8. Disseminate findings and gain peer review: Local and wider teacher community dissemination, with some level of peer review.
9. Take action: Local action is likely and institutional action possible, depending on level of support from managers.
10. Review the process and identify the next cycle: Sustained cycles of inquiry will depend on the development of a learning community and manager support.

Each of these ten steps is significant and it is also worth breaking them into three key stages: first – developing a research question, steps 1 to 5; second – data generation and analysis, steps 6 and 7; and third – sharing findings and taking action, steps 8 to 10. An example of a small-scale professional inquiry is provided in the next section and will expand on the characteristics of each of these three stages.

Professional inquiry depends on building trust so that teachers feel safe to share practice and their evaluation of that practice. It also requires agency, so teachers develop their own research questions or at least come to own the research question when it has arisen for example from a management or quality assurance issue. This kind of trust seems most likely to arise when there is a distributed leadership approach within a school (Boyd & Curtis, 2018; Joram, Gabriele, & Walton, 2020).

The 'uncertainty' of educational research findings, meaning their contested nature, as a body of work and when applied to real world problems in a particular school setting, was found to be an issue for teachers in a US based study (Joram, Gabriele, & Walton, 2020). Teachers may also be sceptical about the contextual similarity of research (Joram, Gabriele, & Walton, 2020). In considering research findings that seem potentially significant for their practice, teachers might reasonably consider 'that is all very well in the USA but that is not the same situation as my school in a suburb of Leeds, England'. However, some of these teachers may feel that they can 'fine tune' research findings from different school contexts and even national systems (Joram, Gabriele, & Walton, 2020).

Based on this study, and with reference to the issues of 'uncertainty' and 'contextual similarity' of the education research evidence the authors speculate that a 'research curator' might have a useful role to play in brokering the liter-

ature for teachers (Joram, Gabriele, & Walton, 2020). The idea of some kind of research mentor supporting teacher researchers engaged in professional inquiry has a long tradition. Recently, regarding teacher education partnerships between schools and a university education department, the research mentor might most obviously be a university-based teacher educator. In professional development projects a respected and experienced internal or external consultant may often be used. In education systems where there has recently been a shift towards school-based teacher education there are new school-based posts, such as 'director for teaching and learning', that might provide effective brokering of the research. It is worth noting that to build trusting professional relations within a professional inquiry team the research mentor should consider demonstrating vulnerability and reflection for example by explicit modelling, unpacking the rationale for their own practice (Boyd, 2014).

An example of professional inquiry

Recently I supported a professional inquiry project as a research mentor, working with six teacher researchers and their school-based facilitator. These were experienced expert teachers from six different schools, in Cumbria in the north of England, who had recently completed professional leadership training, held positions of responsibility and volunteered to participate in the project. It is important to note that this sample of teachers is therefore not representative of the wider workforce including range of experience and motivation towards continued professional learning. The study adopted an action research approach focused on classroom practice (Baumfield, Hall, & Wall, 2012). As a starting point for stage one, 'developing a research question', we asked them to identify a 'stone in their shoe'. By this we mean an issue that was bothering them about their students' progress within their lessons and within a particular curriculum subject. We used prompt questions to provoke thinking and discussion including: What lessons have you have taught recently? What do you feel about the impact of your teaching? Did anyone learn anything and if so how and why? What do you think might be worth investigating about your own teaching? What is the stone in your shoe?

The teacher researchers were encouraged to talk to colleague and share their initial ideas by email and the research mentor responded including providing links to some further reading, providing access to relevant theory, research and professional guidance. At the second face to face session each of the teacher researchers in turn shared the 'stone in the shoe', their initial idea, issue, or question for inquiry and through discussion these were linked to relevant ideas from the literature.

But, as the session progressed, they identified some common interests and worked towards collaborative identification of a shared research question. So, with some mediation by their research mentor, this collection of individual teachers, from six different schools in four different curriculum subjects, collaboratively agreed on a shared focus for inquiry. They decided to investigate how they might encourage 'deep thinking' by their students within the curriculum subject they were teaching. By 'deep thinking' they meant that their learners might think through problem-solving like a mathematician, like a historian, like a geographer, like an artist, and so on.

This issue of 'owning' the research question is highlighted by many colleagues and small-scale studies as a critical aspect of professional inquiry. But having begun with their individual 'stone in my shoe' it also seems possible for teacher researchers to 'come to own' a research question as they collaboratively develop an inquiry, through dialogue and critical engagement with classroom practice and relevant literature. This ownership might be feasible even if the initial issue has been handed down from management, or from an external school inspector, provided the eventual research question connects to the professional purposes, values, and experiences of teacher researchers (Glenn et al., 2023; Punch & Oanacea, 2018).

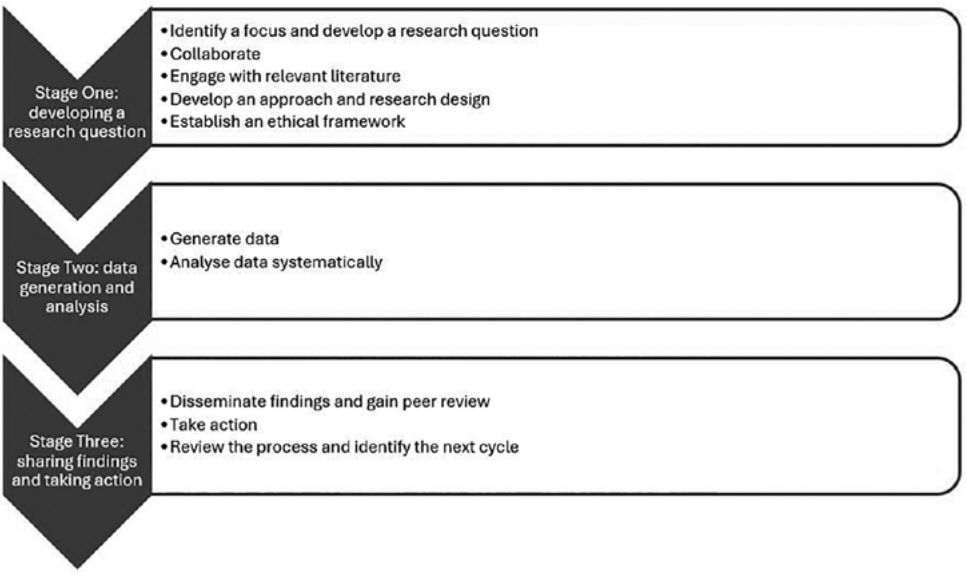


Figure 1. Teachers' collaborative professional inquiry: overlapping stages and steps.

Source: Author's own work.

A concise review of relevant literature was provided by the research mentor during the first cycle of data generation to provoke further thinking and provide wider reading across a complex research focus. Topics included: philosophy for children; epistemic quality; dialogic teaching; design for problem-solving; facilitation of inquiry-based teaching; and the use of Legitimation Code Theory (LCT) to analyse classroom practice, including the semantic pathway or wave of a lesson (Alexander, 2020; Billingsley et al., 2018; Inoue, 2011; Lipman, 1991; Maton, 2013; 2014; 2020).

The design of this professional inquiry combined elements of Japanese 'lesson study' (Jansen et al., 2021) with two cycles of 'action research' (Baumfield, Hall, & Wall, 2012) and was proposed by the research mentor and facilitator but developed through negotiation with the teacher researchers. Stage two of the inquiry, 'data generation and analysis' consisted then of two action research cycles. In the first cycle, in relation to deep thinking, we asked the question 'what is going on?' and then, after agreeing a change in practice for the second cycle of data generation, we asked the question 'what if?'. So, in the second cycle we asked – what is the impact on learning when we make this planned change to our classroom practice? The change in practice agreed upon by teacher researchers included more clearly identifying key concepts, big ideas, within lesson objectives and to use the semantic dimension of Legitimation Code Theory to plan and analyse lessons. In effect each teacher researcher brought detailed description and evaluation of one of their lessons for each cycle of the project. Many of them used video to capture their lesson and used that within their school to support their reflection and evaluation. They gathered some pupil voice, in varied ways, after the lesson to inform their analysis. In some cases, teachers gathered pupil voice by simply talking to two or three pupils they had selected from the class, in other cases teachers used two or three prompt questions asking for written open response on a simple hard copy anonymous survey handout.

The data generation, evaluation of a 'study lesson', included some initial teacher researcher analysis. During a face-to-face session after each cycle this analysis was pursued further through focus group sharing and dialogue. The facilitator and research mentor aimed to model dialogic teaching during this session to achieve congruence between the literature and our own practice (Boyd, 2014; Cordingley et al., 2015). Teachers were involved in two semi-structured focus group meetings where data analysis took place. First, when they presented their own analysis of their study lesson and opened up the issues raised through whole group discussion. Second, when they were asked to critically evaluate and develop a draft thematic analysis of all of the study lessons by the research mentor. The facilitator and the

research mentor jotted down field notes during these meetings. In addition, for each cycle the research mentor and facilitator used thematic analysis (Braun & Clarke, 2006) to consider the whole data set of lesson evaluations plus field notes from the focus group sessions. A 'codebook' approach to thematic analysis was adopted, meaning that we applied interpretive qualitative analysis to generate explanatory themes but also applied a theoretical framework based on our reading of the relevant literature to identify additional themes (Braun & Clarke, 2022). This analysis was shared before an additional face to face focus group session that focused on completing our analysis and discussing our findings.

In stage three of the inquiry over a period of several weeks, the teacher researchers were encouraged to continue to experiment with the change in practice while the research mentor and facilitator drafted a project report for discussion. The teacher researchers presented their project at a teacher conference event and the agreed report was shared more widely across a network of schools and published online (Boyd et al., 2025).

A rationale for professional inquiry

Teachers engage with multiple sources of knowledge beyond their everyday workplace learning from experience. Teaching is a complex values-based, collaborative and relational activity with a highly contested transdisciplinary multi-paradigmatic academic literature. Teaching also benefits from a large body of professional development literature including professional articles, published books and online resources. In addition, teachers engage with school textbook and resource schemes, often with accompanying teacher guidance. Teachers manage this wide range of different knowledge resources, each with different modes of production of that knowledge. They therefore need to develop 'epistemic insight', meaning a critical understanding of the different ways of producing knowledge about teaching (Billingsley et al., 2018). And arguably sessions taught to student teachers should have 'epistemic quality' (Hudson, 2018) and a teacher education programme needs to have 'epistemic coherence' (Heikkilä & Hermansen, 2024). Professional inquiry helps to build epistemic insight.

Part of the knowledge teachers require is referred to as 'research literacy'. However, the concept of research literacy is too often defined by professional researchers and their associations. A more balanced definition acknowledges that in the field of teaching you must be able to critically engage with local practical wisdom and ways of working as well as with theory and research evidence. What and how you teach is a matter of values-based professional judgment, rather than simply

delivering a prescribed curriculum using 'evidence-based' methods which may be of dubious reliability in our post-truth era (Boyd, 2022b). Professional inquiry helps to develop research literacy.

Teachers are 'producers' of knowledge as well as consumers, they are curriculum makers. Through their practice they develop effective ways of working and practical wisdom. Being involved in professional inquiry supports teacher agency and sense of ownership and recognises teachers as producers of knowledge. It depends on and nurtures the 'constitutive' motivation of teachers, their commitment to teaching for its own sake and to supporting their students (Proudfoot & Boyd, 2025). This 'vocation to teach' may seem an old-fashioned idea but our research shows that it persists even in the high accountability, neoliberal policy framework, and managerial context of schools in England where we also found that teachers resent attempts at such instrumental motivation (Proudfoot & Boyd, 2024).

As well as professional inquiry with teachers in Cumbria, I am also currently working on a funded collaborative practitioner research project with teachers in Merseyside. In this case we have full formal ethical clearance and a relatively expensive data generation process involving a skilled post-doctoral researcher observing a lesson, conducting a video recall teacher interview, generating audio recorded pupil voice data, plus teacher researcher collaboration in data analysis. Being involved in this funded collaborative research project is aiming to build the involved teachers' research literacy and capacity, but it is less strategic in this regard than the much lower cost professional development project in Cumbria. The research project is designed to generate high quality research papers and new published public knowledge. The time and commitment required by the teachers is probably not sustainable over the longer term. In a reasonable attempt to manage the workload the teachers have less involvement and control of the research design and process. In contrast, professional inquiry can be designed to be more collaborative and feasible in terms of workload for sustained engagement by busy teachers.

To summarise, I have set out four reasons why teachers need professional inquiry, which are: it builds epistemic insight; it develops research literacy; it recognises teachers as producers of knowledge; and it is more practicable than practitioner research.

Conclusion

Why do six experienced teachers holding management positions *need* to complete a professional inquiry focused on their own classroom practice? Because a manager is *not* a leader. All teachers should be leaders, that is why a teacher

is a professional and not a technician. Manager is a title earned through formal appointment, but 'leader' is a title awarded due to informal workplace action. And the main business of a school is classroom teaching. School managers need to be able to develop collaborative instructional leadership (Blase & Blase, 2000) and to be part of that, willing to share their own classroom practice and model professional inquiry as part of the cultural leadership of the school as a workplace and a learning environment (Hodkinson & Hodkinson, 2005).

I am expecting school managers to earn the title of 'school leader' by enabling teachers to engage in professional inquiry and to be part of that collective effort. This kind of distributed leadership approach acknowledges that professional development of teachers is not merely about behavioural change, it is also about change in attitudes, intellectual capacity, and mindsets (Evans, 2014). I am expecting more of teachers than being merely technicians 'delivering' the curriculum using top-down 'evidence-based' approaches dictated by school managers. I am expecting teachers to be curriculum makers (Priestley et al., 2012) who contribute to collaborative instructional leadership and the development of research-informed practice in schools. I am also expecting more of the research mentor, acting as a teacher educator, than simply pointing teacher researchers at the relevant literature. The brokering of research as a teacher educator, helping teachers to problem-solve the why as well as the what, requires a robust research literacy and facilitation skills (Loughran & Menter, 2019).

Being a 'teacher researcher' as proposed by Lawrence Stenhouse in his influential book (1975) has inspired effective professional development for teachers through practitioner research over the last fifty years which still seems important for some teachers some of the time. However, I propose that well-designed collaborative 'professional inquiry' for all teachers all the time is more realistic, and perhaps more ambitious for the status and well-being of the profession than occasional involvement in practitioner research.

An argument for professional inquiry rests on an acceptance that teaching is a complex, relational, values-based professional activity and can be considered as a 'discipline' (Furlong, 2013; Loughran & Russell, 2009). This means that teacher educators, acting as mentors to teachers' professional inquiry, must be scholars, with appropriate knowledge and skills to shape policy and practice (Loughran & Menter, 2019). It also means that teachers, as expert professionals, must be valued and supported as contributors to the knowledge base of the discipline.

What teachers need is collaborative and well-supported professional inquiry. How I continue to learn to teach is the message.

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