



# Teacher Development

An international journal of teachers' professional development

ISSN: 1366-4530 (Print) 1747-5120 (Online) Journal homepage: <http://www.tandfonline.com/loi/rtde20>

## We modify each other's lessons: the role of literacy work circles in developing professional community

Peter Samuelson Wardrip, Louis M. Gomez & Kimberley Gomez

To cite this article: Peter Samuelson Wardrip, Louis M. Gomez & Kimberley Gomez (2015) We modify each other's lessons: the role of literacy work circles in developing professional community, *Teacher Development*, 19:4, 445-460, DOI: [10.1080/13664530.2015.1051186](https://doi.org/10.1080/13664530.2015.1051186)

To link to this article: <http://dx.doi.org/10.1080/13664530.2015.1051186>



Published online: 20 Aug 2015.



Submit your article to this journal [↗](#)



Article views: 100



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 2 View citing articles [↗](#)

## We modify each other's lessons: the role of literacy work circles in developing professional community

Peter Samuelson Wardrip<sup>a\*</sup>, Louis M. Gomez<sup>b</sup> and Kimberley Gomez<sup>b</sup>

<sup>a</sup>*Learning Research and Development Center, University of Pittsburgh, Pittsburgh, PA, USA;*

<sup>b</sup>*Graduate School of Education and Information Studies, University of California at Los Angeles, Los Angeles, CA, USA*

*(Received 23 October 2012; final version received 11 February 2014)*

To address teacher isolation in schools, more reform leaders are finding hope in establishing professional communities as a way to promote continuous school improvement. This case study presents one approach for developing teacher professional community: a teacher work circle. Using the characteristics of professional community created by Kruse, Louis, and Bryk, this case study describes a sixth-grade, middle school, teacher work circle addressing the problem of students reading in the content areas. This case suggests that the work circle approach may productively support professional community among teachers focused on instruction. This paper discusses implications for professional development and further supporting a social infrastructure of teaching colleagues.

**Keywords:** teacher learning; teacher collaboration; professional community

The work of teaching has long been characterized as taking place in isolation (Lortie 2002; Moir et al. 2010). Too often in the history of schools, teachers have worked alone with discrete groups of students in separate classrooms with little time to engage in dialogue with colleagues about teaching practice. However, the work of teachers does not solely occur in classrooms, so opportunities for sharing practice are indeed available in schools.

For some time now, to address this isolation, many reform leaders have been finding hope in establishing professional communities as a way to promote continuous school improvement (Stoll et al. 2006; DuFour, DuFour, and Eaker 2008; Servage 2008). A professional community describes the interpersonal relations and activities among teachers to improve teaching and learning (Stevens, Kahne, and Cooper 2006). In this article, we present a case of a group of content-area, sixth-grade teachers that came together around an instructional challenge that they all faced in their classroom, reading comprehension. This case highlights the ways in which, through the structure and practice of a work circle engaged in integrating strategies to support reading comprehension in their respective content areas, elements of professional community emerged within the group.

---

\*Corresponding author. Email: [peterwardrip@gmail.com](mailto:peterwardrip@gmail.com)

### **Professional community**

In the service of school improvement, research suggests that professional communities of educators can offer a host of benefits (Hord 2004, 2009). For example, professional communities can support current as well as new instructional initiatives (DuFour and Eaker 1998). One possible reason for this is that professional communities and the social supports that are implicit in their formation also represent one key component of effective professional development (Guskey and Yoon 2009).

In addition, professional communities can provide opportunities for innovation and improvement of practice (Talbert and McLaughlin 1994; Cochran-Smith and Lytle 1999; Grossman, Wineburg, and Woolworth 2001). For example, in efforts of collaboration and collegiality, teachers' beliefs, values, and notions of instruction and learning become reified in the products they co-create (Wenger 1998). Therefore, innovative responses to instruction or problems of practice can be the products of negotiation and learning among the teachers.

Teachers in strong professional communities feel a sense of empowerment and a feeling of affiliation with their schools (Kruse, Louis, and Bryk 1995). They have chances to collaborate, which can increase teachers' sense of mutual support and feeling of personal responsibility for effective instruction (Louis 1992). McLaughlin and Mitra (2001) identify a supportive community of practice as one of five key components to their theory for helping reforms go deeper. Creating successful professional communities requires a deliberate effort and much nurturing, yet the potential to decrease teachers' isolation and improve instructional practice in schools is clear.

While research notes that professional communities form around such features as common instructional problems or school-based challenges, strategies or initiatives, the professional community described in this case forms around both a common professional development routine and structure, the work circle as well as a long-term instructional challenge, reading in the content areas. We will describe both of these elements next, but it is worth stating these two elements are similar to the development of lesson study for learning community (LSLC) (Saito et al. 2006; Saito and Tsukui 2008; Saito, Khong, and Tsukui 2012). LSLC has emerged in some countries as a way to build community around the practice of lesson study so that lesson study, an iterative group process to improve instruction, can be a lever for school improvement.

### **Work circles**

In the work described here, the teachers formed a work circle (Shrader et al. 1999; Bouillion and Gomez 2001; Gomez et al. 2004, 2006; D'Amico 2005; Shapiro and Wardrip 2011) around the concept of integrating literacy across the curriculum in the sixth grade. Work circles are an example of teaming in schools, a practice which has been noted as important for supporting and improving instruction in the middle grades (NMSA 2010). As we will describe, the elements of work circles are distinct from the general concept of teacher teams. However, it is important to note that the instantiation of a work circle in this case does incorporate two important aspects of teacher teaming highlighted in the literature. This includes the fact that the group of teachers in this work circle was interdisciplinary in that they represented different

content areas. In addition, facilitating the cohesion of the work circle, they utilized a common planning time created by the school. By common planning time, we mean ‘a regularly scheduled time during the school day when teachers who teach the same students meet for joint planning, parent conferences, materials preparation, and student evaluation’ (Kellough and Kellough 2008, 394). The positive role that interdisciplinary teaming plays on the impact of the teaming arrangement as well as the importance of common planning time have been documented in the literature (Arhar, Johnston, and Markle 1989; Dickinson and Erb 1997; Erb and Stevenson 1999).

Work circles are teams of researchers and practitioners that meet on a regular basis to address an issue, design or revise curriculum, or implement new strategies for instruction or assessment (Shrader et al. 1999; Gomez et al. 2006). Work circles have been developed as partnerships of research for practice through the design of curricula and project-based instructional units (Shrader et al. 1999; Reiser et al. 2000; Gomez et al. 2004, 2006; Kwon, Wardrip, and Gomez 2014). Engaging in a co-design process, a work circle is a collaborative design group. ‘A work circle brings together people with diverse expertise to design materials and to address challenging issues’ (Gomez et al. 2006, 32). In work circles, ‘teachers, researchers, and developers work together in defined roles to design an educational innovation, realize the design in one or more prototypes, and evaluate each prototype’s significance for addressing a concrete educational need’ (Roschelle, Penuel, and Shechtman 2006, 607).

Curricular improvement design work circles have a foundation in the participatory design tradition (Schuler and Namioka 1993). The participatory design approach has been influential in the design of software and computer systems (Kensing and Blomberg 1998). Through collaboration, the expertise of the various members of the design team is equally valued and each member learns from one another through their interactions. By involving the ‘end users’ in the design, the researchers also try to ensure the use and utility of the products they design (Muller and Kuhn 1993). During the period between 1998–2002, 11 work circles were convened as part of the Center for Learning Technologies in Urban Schools (LeTUS) effort to put learning theory into action by designing technologies, science curricula and other artifacts that instantiate these theories in order to study their impact on the school context (Shrader et al. 1999). As a key component of LeTUS’ curricular design research effort, LeTUS work circles were teams of researchers and practitioners that met on a regular basis to design and implement technology-embedded, project-based, science units.

As a social infrastructure for the design process, work circles are iterative, collaborative and product centered (Shrader et al. 1999). These products might be curricula, strategies, assessments, educative supports to curricula, to name a few. Throughout the design process, teachers may reflect on their own practice as well as the practice of their colleagues, jointly pose questions regarding the problems they face, identify gaps between theories and the practices related to the theories and challenge common assumptions. Through the work circle process, the participants build upon or draw from the work of others to make visible most of what they (and others) know, learn and often take for granted about teaching and learning (Cochran-Smith and Lytle 2001; Gomez et al. 2006).

### Supporting reading to learn

As a long-term instructional challenge, adolescent literacy has been identified as a crucial area to address as part of the reform agenda in the middle and upper grades (Snow and Biancarosa 2003; Berman and Biancarosa 2005; Biancarosa and Snow 2006). Adolescent students begin to come across academic discourses and content area concepts in school that necessitate different reading strategies than the more traditional literary forms. Adolescent literacy advocates not only point out the need to improve students' reading, but also emphasize the role literacy plays in students' high school success, closing the achievement gap and preparing students for a changing workplace after high school. However, literacy is not just confined to Language Arts and English classrooms. Adolescent readers often struggle to make sense of text in the content areas (Language Arts, Science, Social Studies and Mathematics). And this goes beyond simple decoding of text.

The emphasis of this work is to incorporate into the teachers' instructional repertoires a suite of reading-to-learn strategies which intend to activate skills such as defining, analyzing, summarizing and reflecting (Gomez et al. 2006; Gomez and Gomez 2007; Wardrip and Tobey 2009; Herman et al. 2010; Herman and Wardrip 2012). Through practice, collaborative analysis and peer-based discussions, students can better internalize and take ownership of the reading-to-learn strategies and skills (Pressley et al. 1992; Biancarosa and Snow 2006; Gomez and Gomez 2007; Herman et al. 2010). These skills are not only critical aspects of learning from text in the content areas, but also constitute important features of reading critically and communicating, which are practical, real-world skills students will need beyond school (Gomez and Gomez 2007; Zywica and Gomez 2008). This attention to literacy is vital because content area teachers do not necessarily have training in supporting reading in their classes.

The work circle focuses on building reading-to-learn environments that rely on the three strategic approaches to reading support: summarizing, T-charts and annotating text (Sherer et al. 2009; Herman et al. 2010). Summarizing allows students to capture the gist of a chosen text in writing as well as the major concepts and details supporting those concepts. T-charts, also known as double-entry journals, are two- or three-column charts that provide a structure for students to monitor and document their understanding of texts (Atwell 1990). Annotation is the process of marking up a text in order to perform content analysis as well as reveal the meaning behind various textual features (Liu 1996; Zywica and Gomez 2008). Teachers couple these reading tools to the text so that students may gain deeper understanding of the content area within which they are learning. These reading-to-learn strategies intend to activate skills such as defining, analyzing, summarizing and reflecting, which are important.

### Theoretical perspective

The purpose of this case study is to examine the role a literacy work circle carried out by a small group of teachers played in the development of professional community. As a theoretical framework, the five core characteristics of professional communities initially outlined by Kruse, Louis, and Bryk (1995) is used to conceptualize aspects of a professional community. These core characteristics are conceived to articulate what distinguishes a professional community of teachers

from simply a group of teachers that gets together (Bryk, Camburn, and Louis 1999; Grossman, Wineburg, and Woolworth 2001).

This set of characteristics of a professional community provides a lens through which to view and code rich, qualitative data and artifacts produced by the work circle. These core characteristics have been identified by other researchers as key to the development of professional community, although possibly under different terminology (e.g. McLaughlin and Talbert 2006; Hord and Tobia 2012). Kruse, Louis, and Bryk (1995) identified the following key elements:

- (a) shared norms and values;
- (b) reflective dialogue;
- (c) deprivatization of practice;
- (d) focus on student learning; and
- (e) collaboration.

Shared norms and values are the teachers' beliefs about institutional purposes, practices and desired behaviors (DuFour 2004). However, this is not intended to entail complete agreement of all beliefs, but rather a core set of similar values on which the teachers' community may develop. These beliefs can shift and converge among the teachers, though, through reflective dialogue (Stuart and Thurlow 2000). Teachers' reflective dialogue refers to conversations that critique practice, pedagogy and student learning (Stoll et al. 2006).

Deprivatizing practice makes public the instruction in the classroom. This might include teachers sharing the instructional planning that was involved for a particular lesson, the decisions made in the course of teaching or the strategies to assess students' understanding. These conversations require teachers to practice their craft in the open and place sustained attention on how pedagogy is linked to student learning.

The focus on student learning is central to maintaining the focus on the students. The results of student learning are what guides the inquiry of the professional community and ultimately serves to assess an element of the community's success (Reichstetter 2006). All of these elements work under the assumption that the teachers are collaborating together. This assumption suggests that teachers can achieve more together than individually and research suggests that this collaborative work practice is an important component of successful schools (Little 2003).

The framework and data collection are important to understand the phenomenon of professional community among teachers. Some have viewed professional communities as 'fuzzy' and in need of a stronger empirical base (Hodkinson and Hodkinson 2003; Visscher and Witziers 2004). These five components serve to ground the definition of professional community within a framework for empirical exploration. In what follows, we will explain the design of the study.

### Research design and setting

The work being reported in this paper is part of a larger effort (Gomez et al. 2004; Sherer et al. 2009; Herman et al. 2010) of addressing literacy in the content areas at middle schools and high schools. The essence of the larger work is to build effective reading-to-learn environments for middle school students and to use these

environments to help us understand the reciprocal relationship between content area achievement and reading achievement.

This work took place in an urban suburb of a large Midwestern town of the United States in a school containing Kindergarten to 8th grade students. The school attracts a diverse group of students from both disadvantaged and extremely affluent families. In particular, this paper will focus on one group of sixth-grade teachers over the course of the first year of technical assistance involvement.

The teachers were chosen through a process intended to seek volunteer participation. First, the school district was approached by the leader of the research team explaining the team's current focus of developing reading-to-learn strategies in the content areas. The school district, in turn, recommended a school for participation. Next, a member of the larger research team made a brief introductory presentation to the teachers at the school explaining the reading-to-learn strategies and inviting participation from a team or teams of teachers. Once one team expressed interest, we met with the team of teachers to describe what the involvement of work circles entailed and further confirm the team's interest in proceeding.

In this group of teachers, Ms N teaches Mathematics, Mr C teaches Reading and Language Arts and Ms T teaches Social Studies and Science. They teach three blocks of classes every day, which reach all of the sixth-grade students. Each class is taught every day except for Science and Social Studies, which are taught on alternating days. Reading and Language Arts also alternated, although they often blurred together as one block. Ms N had more than 15 years of teaching experience, and Ms T and Mr C had approximately five years of teaching experience. As a team, these teachers had been together for one year. We regularly attended the work circles. In addition, two other researchers sometimes attend, Mr B and Mr S.

Before the initiation of the work circle, the teachers noted that they already met weekly together. While we do not have a record of the previous year's meetings, the teachers stated that despite their regular meetings, they rarely discussed instruction and did not know what each other was teaching. The teachers individually described the meetings as generally being driven by two factors. First, weekly meetings were part of what the school did. All grade-level teams were guided to meet weekly. And these teachers did so willingly since they were collegial with each other.

Secondly, the meetings often were driven by meeting an administrative need either self-imposed or imposed by the school's administration. For example, a self-imposed administrative task included organizing a field trip, which included creating a common letter and permission slip to teachers, choosing the day of the field trip, assigning roles for arranging the logistics of the field trip, and creating rules and policies to determine eligibility for students to participate on the field trip. An example of an externally imposed task from the school administration included identifying and creating a list of students performing at a low level at the midpoint of the quarter.

## **Methodology**

This qualitative study seeks to problematize the role of a teacher work circle in developing teacher professional community. In so doing, we provide a case study to highlight the elements of professional community that appear to be evident in the work circle as well as the elements that are absent. We employ a case study approach because the context of the teacher work circle was important to the phenomenon of

study (Yin 2003). Moreover, this teacher work circle was selected because it was particularly suitable to highlight and illustrate aspects of the theoretical framework used for understanding professional community (Eisenhardt and Graebner 2007).

At the research site, grade-level teachers already were meeting during a common planning time, which was meant to promote professional community. However, the school did not prescribe how teachers' time together is spent. There is no guarantee that a professional community will develop amongst grade-level teachers merely because they teach in the same grade. This is a reason to study more closely whether engaging in literacy work circles can foster the core characteristics of a professional community.

For two years, the three teachers in this work circle met once a week during the school year for one hour every Friday and about six hours a week during eight weeks of the summer. Once familiar with the literacy tools, the teachers examined the role of text in their respective content areas and designed lessons to embed the reading-to-learn strategies with the texts. Finally, once they began enacting the literacy tools in the classroom, they reflected on the tool use in order to refine their place in future lessons.

### Data and analysis

As participant observers, we gathered observation notes, meeting agendas and teacher-generated artifacts to provide a record of the meetings. In addition, meetings were audio-recorded. We engaged in regular debriefs with the teachers after the work circle meetings as well as time to time after their classes. In addition, interviews were conducted with the teachers three times throughout the school year. These data provided thick qualitative descriptions of the literacy work circles. However, work circle transcripts were the primary source of data used in my analysis. This was an intentional choice based on transcripts' ability to illustrate the phenomenon of interest.

The analytic process began during the data collection. We wrote analytic memos to explore and clarify the dimensions of the categories used for coding (Corbin and Strauss 2008). Using the framework of professional community, the data from the work circle transcripts were coded, often fitting into more than one of the element categories. The coded data also provided us with counterexamples. In using the Kruse, Louis, and Bryk (1995) framework, it is worth noting that reflective dialogue and shared norms and beliefs couple themselves to other characteristics of the framework. For example, it is difficult to talk about student learning without reflective dialogue.

We sought credibility in our analysis through a number of strategies (Lincoln and Guba 1985). First, we strove to maintain methodological consistency throughout our data collection and analysis (Morse et al. 2002). Therefore, the data and analysis were aligned with our research question and theoretical framework. This was not intended to constrain the analytic process but rather to ensure a 'trustworthiness' (Lincoln 1995) in that the point of inquiry, analytic approach and analysis were carried out systematically and as intended. Second, we maintained frequent open and critical discussions of the analysis among the researchers associated with this work. This allowed us to clarify the definitions of our codes, challenge certain assumptions embedded in those definitions and refine the coding definitions to reach greater clarity of the codes. Third, we shared an initial draft of our research



report with the teachers and other collaborators to check our interpretations, the logic and the applicability of the analyses. Further revisions were made based on this member-checking.

### **Results: Using the framework to describe the development of professional community**

The literacy work circle began in a collaborative space. Because the teachers chose the meeting times and dates, the time was protected. Other meetings took place outside of the Friday meetings, but these rarely involved instruction. Too often, the demands outside of the classroom take up the teachers' collaborative work time: parent issues, school paperwork related to standardized tests, grades etc. Instead, Friday was a time for the teachers to engage in the work of the work circle. This included time to co-design lessons that use literacy strategies that provide support for students to learn the intended content, discuss classroom challenges related to supporting reading in the classes, or assessing and commenting on students' use of the literacy strategies, to name a few.

Importantly, it is the idea of literacy and integrating strategies that gives the teachers a reason to *collaborate*. Addressing the problem of reading in their content areas and jointly adapting reading-to-learn strategies give the teachers opportunities to collaborate around instruction. Ms N stated that this process gave her an opportunity 'to really feel what a kid might be feeling when they're approaching a piece of writing or reading and how could they get better understanding through these strategies'. This was a perspective shared by the others.

The teachers noted two factors that were important to catalyzing their collaboration in the work circle. First, the introduction of a long-term instructional topic, in this case literacy, provided a common problem of practice to discuss, integrate literacy strategies into instruction and reflect upon instruction. Second, and not insignificant, they noted that the involvement of an outside participant-observer prompted the teachers to protect that time. As Ms T put it, it was important 'having university people's resources and building those relationships'.

During these meetings, teachers had opportunities to share the content of their classes, their classroom pacing and successful instructional strategies. For example, this *deprivatizing of practice* allowed the language arts teacher to offer how he teaches topic sentences as a vehicle for writing summaries. The math teacher noted how she encourages the students to identify the textual features of their workbook as a way to understand a new concept. The science teacher shared how she helps students identify in-text definitions and how her lessons change over time. For instance, she said,

I modified the lesson as the day went. One thing I did was have the students write a summary of the reading. The other thing I did was have the students answer some questions about the reading. I tried to focus on questions that the T-chart specifically helps with ... something like: Were the Neanderthals similar to modern humans? And I told the students that their summaries should answer the questions that they had written for each heading and subheading.

It is important to note from this quote that she is not only sharing what took place in her class, but also how she is directing the students' reading. She is trying to create a purpose for their reading aside from gaining the content. The purpose here

being the creation of a summary that answers questions the students create for each heading and subheading. As part of the routine of annotating, the students circled the headings and subheadings of the readings. In addition, the students wrote a question for each heading and subheading for which they hoped to find an answer in the reading. The work circle offered opportunities for each teacher to share these kinds of instructional details.

The work naturally went beyond literacy to bigger picture instructional matters. By identifying and sharing the trajectory of their class content to the work circle, the teachers saw overlaps in their content. Initially, this task's purpose was to identify places to embed the literacy strategies to aid in teaching and learning content. The teachers rearranged the sequence of their content to provide more continuity of what they were teaching. For example, in the first semester of the work circle, the teachers linked their work for an interdisciplinary family history project. This project, they stated, would not have taken place without the literacy work circle.

The examples of sharing led the teachers to talk about students as well. In general, the literacy strategies were used as tools to address student difficulties in content area reading. As the teachers became more familiar with the strategies, they were able to discuss how they used or adapted the strategies in their planning and lessons. There were numerous examples of the teachers sharing their lesson plans by prefacing what their learning goals were and what challenges they anticipated the students having in reaching those goals. For example, the science teacher shared how she used annotation as a way for students to engage in textbook readings with difficult vocabulary. The math teacher observed that annotation, with its multiple layers of complex tasks, provided students of different reading levels to connect with the text. She noted that while some students may not be able to clearly annotate for claims and evidence, they most likely can identify key vocabulary, or, in the case of mathematics, key quantities needed to solve a problem. The talk of appropriateness of a strategy usually led to consideration of how we know the students have understood the reading. These ideas related to differentiation and assessment were examples of the work circle's *focus on student learning*.

This focus on student learning emerged from stories from the teachers' work in pushing their students. This is especially true in Mr C's classroom experiences with literature circles. Literature circles were already an established classroom practice of his in which students discuss works of literature in groups based on a set of discussion routines. The work circle provided a space for him to share the work with the other teachers. For example, he spoke of his participation in the circles by saying,

after the summaries were shared by one or two students, I began asking questions about the text. I asked them 'author and you' questions from the QAR [Question-Answer-Response]. This also holds them accountable for those questions beyond a grade just as the summaries they write act in the discussion ... I like playing the devil's advocate as a way to encourage the students to grapple with opinions and ideas that are difficult.

By sharing experiences from the literature circles, Mr C is sharing how the students assume different perspectives in their analysis of the text through 'author and you' questions. These questions are designed to formulate ideas from the text, but that are not explicitly stated in the text. According to the QAR strategy (Raphael 1986; Raphael and Au 2005), the answers to these questions reside in the reader's head

and thus require interpretation. This is part of Mr C's intention for the students to confront ideas that are not easy.

By focusing on the students' learning and their own practices, the meetings afforded the teachers rich opportunities for *reflective dialogue*. Reflection, as one characteristic of professional communities, allowed the other four characteristics to take place. The work circle began in the summer by mapping out the content of the school year. While providing an opportunity to share content with the teachers, the teachers also used this activity as an opportunity to assess what 'worked'. In order for the teachers to learn the literacy strategies, they reflected on their own use of these tools in the early work circles. They remarked on what worked for them in relation to the tools as well as reflecting on their role as a reader. Once the school year began, the teachers reflected on the implementation of the strategies. Reflection has been key to the teachers' ability to refine the literacy strategies as they apply to their specific content areas. And reflection has been a catalyst for illuminating the teachers' expectations of students in their classes.

One key aspect of reflective dialogue that became evident in the teacher work circle was the development of a common language. As the language arts teacher mentions:

To be honest, before we didn't have a common language, so [the science teacher] teaching summary or teaching her version of T-chart was different. We didn't always even use the same language. And even with things like QAR, which is not part of our thing but I'm a big fan of it, that language has now crept into Ms N's and Ms T's vocabulary, though we're like, 'this is a right there question'.

In this quote, the language arts teacher points out two aspects of common language that have been addressed within their work circle. First, the language that defines the activities that they are encouraging their students to do. Since writing summaries was a reading strategy they employed, they were forced to discuss at different times what a summary is, what constitutes an excellent summary and what are some common 'missteps' that they can identify in students' summaries to guide them to better summaries.

In addition, the teachers utilized common analytic terms to discuss their lessons. In the quote above, the language arts teacher states that his colleagues are starting to use terms from QAR to describe different categories of questions that they ask students about the reading texts. For instance, a 'right there' question would be a literal question that can be found right in the text that the students are reading while an 'author and you' question requires the student to relate the content in the text with his or her personal experience.

Reflecting on the teachers' expectations of the students is one way the teachers' beliefs emerged in their discussions. Agreeing on the expectations of the students was a key component in implementing these strategies. First and foremost, these teachers believed that understanding text was key to making meaning of their content areas. These *shared norms and beliefs* were also evident in the teachers' commitment to using the three literacy strategies as a way to address students' reading obstacles. The math teacher mentioned early on that her perspective of the role of reading in her content area was changing and coming more in line with the other two teachers. She said, 'I'm starting fractions and I was struck by how much math vocabulary there was. I was using words like: product, rational, irrational, denominator, numerator, factor, multiple – that's a lot of math vocabulary the students need

to know.' She realized that her textbook was filled with new, discipline-specific vocabulary and the textbook writers expected students to write summaries and explanations about their problem-solving strategy use.

As these examples of results demonstrate, the literacy work circle illustrated all five of the categories in our framework. In some cases, a component of the work circle activity may contribute to more than one characteristic at the same time. For example, reflective dialogue overlapped in the data with a focus on student learning substantially.

It's important to note that the literacy work circle created a tension in the teacher community because of the time commitment. Because the work has demanded the teachers to reexamine the role of text in their classrooms and how they support the students' reading of that text, it has required more planning and reflection time. This time requirement allows for some of the teachers to interact with the strategies more than others. However, this degree of strategy participation has not impeded work circle participation. With a year of weekly meetings, none of the teachers have missed more than three meetings.

It's also important to note that teacher beliefs and curriculum have influenced the amount of strategy use amongst the teachers. For example, the math teacher stated how much more challenging it is to use the strategies in math class as opposed to science. The other teachers agreed with this assessment. In addition, certain strategies lend themselves to certain types of content. For example, the group has found it difficult to apply annotation to short fiction. This has allowed the science/social studies teacher to apply literacy strategies to her content more easily than the other two teachers.

This framework is helpful to capture characteristics of a professional community. However, our data show us that it is difficult to disentangle reflective dialogue and shared norms and beliefs from the other characteristics. For example, how does a professional community focus on student learning without reflective dialogue? And how does a professional community focus on student learning without coming to the shared belief of what serves as evidence for student learning or that the focus on student learning is important?

## Discussion

Improving schools involves more than simply restructuring them. For example, having teachers divided into grade-level teams with common planning time is a start. However, once the structures of this kind are put in place for teachers to come together, policy makers and administrators need to consider what work the teachers will carry out. What are the human and social dimensions for community beyond the structures (Kruse, Louis, and Bryk 1995)? This work contributes to the field's understanding of professional community by exploring a case of a literacy work circle surfacing key components of professional community.

This paper leads us to believe that literacy work circles could play an important role in developing professional community beyond the structures. The literacy work circle allowed teachers to reflect on their practice and student learning, uncover their beliefs and collaborate in a meaningful way. It is the importance of keeping both structures and instruction in mind. When these teachers planned and discussed about literacy strategies, they were able to talk about a vast array of their professional experiences. Perhaps this is one area for further investigation.

One of the implications that this work suggests is a set of design principles for the formation of a work circle. Having the structure of common planning time, regularity of meeting time, a long-term instructional goal, deep analysis of cross-curricular content, and an outside participant-observer are components of our work circle's formation (Shrader et al. 1999; Gomez et al. 2006). These principles are analogous to findings from other disciplines engaged in participatory design (Kensing and Blomberg 1998). Instantiating these principles in future work circles may serve to explore their salience in the development of professional community and teachers' participation therein.

Work circles are just one example of how teachers can come together. Other examples could be groups that exist within the school's organizational structure such as: curriculum planning teams, department teams, common course teams, school improvement committees etc. There could be groups that exist in schools outside of the organization structure such as board certification or alternative certification cohorts. We can imagine teachers coming together around other long-term instructional topics besides literacy. In our case, the teachers have said that literacy is broad enough that it applies to all of the teachers' content areas and is important to their instructional goals. Students need strategies to read text in all of their classes. However, we can imagine other broad topics as well, such as project-based learning (Shrader et al. 1999; Wardrip 2008), cooperative learning or technology.

However, coming together and having a common goal for the group may not represent the complete conditions needed to coordinate a group for professional learning. The work circle represents a professional learning routine that provides a framework for the norms of interaction and goals of the group. The process is iterative and product centered. Testing out ideas and making mistakes are expected processes that teachers engage in. And the work circle is grounded in practice. This case and other studies suggest that teachers gain many of their insights from actual practice; both their own and from others (Barth 1990; Grierson and Gallagher 2009).

It is worth noting that this is similar to the development of lesson study for learning community (LSLC) (Saito et al. 2006; Saito and Tsukui 2008; Saito, Khong, and Tsukui 2012). LSLC has emerged in some countries as a way to build community around the practice of lesson study so that lesson study, an iterative group process to improve instruction, can be a lever for school improvement. This case presents the extensive work of one work circle. However, it is worth considering, similar to the emerging work of LSLC, in what ways can work circles serve as a lever for developing a culture and community working toward instructional improvement collectively.

Indeed, literacy is a reason for teachers to come together and share practice, but in actuality what might be happening is the literacy work circle is building increased interpersonal trust between and among the members in the professional community. Looking more closely into the development of relational trust (Bryk and Schneider 2002) among the teachers may be where research discovers that the literacy work circle has the greatest amount of traction.

### **Disclosure statement**

No potential conflict of interest was reported by the authors.

### Notes on contributors

Peter Samuelson Wardrip is a learning scientist at the Children's Museum of Pittsburgh and visiting researcher at the University of Pittsburgh. Peter designs and studies ambitious teaching and learning environments.

Louis M. Gomez is the MacArthur Chair in Digital Media and Learning at UCLA's Graduate School of Education & Information Studies. Gomez is also currently serving as a senior fellow at the Carnegie Foundation for the Advancement of Teaching in Palo Alto, Ca. His scholarship focuses on understanding how to support organizational change in schools and other institutions.

Kimberley Gomez is an associate professor in the urban schooling division faculty of the Graduate School of Education and Information Studies at the University of California at Los Angeles (UCLA). Gomez is also a senior fellow for Literacy and Language Development at the Carnegie Foundation for the Advancement of Teaching.

### References

- Arhar, J., J. H. Johnston, and G. C. Markle. 1989. "The Effects of Teaming on Students." *Middle School Journal* 20 (3): 24–27.
- Atwell, N. 1990. *Coming to Know: Writing to Learn in the Intermediate Grades*. Portsmouth, NH: Heinemann.
- Barth, R. 1990. *Improving Schools from Within*. San Francisco: Jossey-Bass.
- Berman, I., and G. Biancarosa. 2005. *Reading to Achieve: A Governor's Guide to Adolescent Literacy*. Washington, DC: National Governors Association Center for Best Practices.
- Biancarosa, G., and C. E. Snow. 2006. *Reading Next – A Vision for Action and Research in Middle and High School Literacy: A Report to Carnegie Corporation of New York*. 2nd ed. Washington, DC: Alliance for Excellent Education.
- Bouillion, L. M., and L. M. Gomez. 2001. "Connecting School and Community with Science Learning: Real World Problems and School-Community Partnerships as Contextual Scaffolds." *Journal of Research in Science Teaching* 38 (8): 878–898.
- Bryk, A., E. Camburn, and K. S. Louis. 1999. "Professional Community in Chicago Elementary Schools: Facilitating Factors and Organizational Consequences." *Educational Administration Quarterly* 35 (5): 751–781.
- Bryk, A. S., and B. Schneider. 2002. *Trust in Schools: A Core Resource for Improvement*. New York: Russell Sage Foundation.
- Cochran-Smith, M., and S. L. Lytle. 1999. "Teacher Learning in Professional Communities: Three Knowledge–Practice Relationships." In *Review of Research in Education*, edited by P. D. Pearson and A. Iran-Nejad. Vol. 24, 251–307. Washington, DC: American Educational Research Association.
- Cochran-Smith, M., and S. L. Lytle. 2001. "Beyond Certainty: Taking an Inquiry Stance on Practice." In *Teachers Caught in the Action: Professional Development that Matters*, edited by A. Lieberman and L. Miller, 45–58. New York: Teachers College Press.
- Corbin, J., and A. Strauss. 2008. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park: Sage.
- D'Amico, L. M. 2005. "The Center for Learning Technologies in Urban Schools: A Case of Design-Based Research in Education." Unpublished Meta Study Case Report. Accessed June 5, 2012. [http://www.lrdc.pitt.edu/metastudy/pdf/letus\\_final2006.pdf](http://www.lrdc.pitt.edu/metastudy/pdf/letus_final2006.pdf)
- Dickinson, T. S., and T. O. Erb. 1997. *We Gain More than We Give: Teaming in the Middle School*. Columbus: National Middle School Association.
- Dufour, R. 2004. "What is a Professional Learning Community?" *Educational Leadership* 61 (8): 6–11.
- Dufour, R., R. Dufour, and R. Eaker. 2008. *Revisiting Professional Learning Communities at Work: New Insights for Improving Schools*. Bloomington: Solution Tree Press.
- Dufour, R., and R. Eaker. 1998. *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement*. Bloomington: Solution Tree.

- Eisenhardt, K. M., and M. E. Graebner. 2007. "Theory Building from Cases: Opportunities and Challenges." *Academy of Management Journal* 50 (1): 25–32.
- Erb, T. O., and C. Stevenson. 1999. "From Faith to Facts: Turning Points in Action: What Difference Does Teaming Make?" *Middle School Journal* 30 (3): 47–50.
- Gomez, L. M., and K. Gomez. 2007. "Reading for Learning: Literacy Supports for 21st-Century Work." *Phi Delta Kappan* 89 (3): 224–228.
- Gomez, L. M., K. Gomez, A. Bryk, P. Herman, and N. Pinkard. 2004. "Understanding the Connection Between Science Achievement and Reading Achievement." National Science Foundation Research on Learning Grant (ROLE).
- Gomez, K., J. Sherer, T. Borg, J. Dowling, and D. Evans. 2006. "Literacy Infusion in a High School Environmental Science Curriculum." *Spectrum* 31 (3): 31–38.
- Grierson, A. L., and T. L. Gallagher. 2009. "Seeing is Believing: Creating a Catalyst for Teacher Change Through a Demonstration Classroom Professional Development Initiative." *Professional Development in Education* 35 (4): 567–584.
- Grossman, P., S. Wineburg, and S. Woolworth. 2001. "Toward a Theory of Teacher Community." *The Teachers College Record* 103 (6): 942–1012.
- Guskey, T. R., and K. S. Yoon. 2009. "What Works in Professional Development?" *Phi Delta Kappan* 90 (7): 495–500.
- Herman, P., K. Perkins, M. Hansen, L. Gomez, and K. Gomez. 2010. "The Effectiveness of Reading Comprehension Strategies in High School Science Classrooms." In *Proceedings of the 2010 Interactional Conference of the Learning Sciences*, edited by K. Gomez, L. Lyons, and J. Radinsky, 857–864. Chicago: International Society of the Learning Sciences.
- Herman, P., and P. S. Wardrip. 2012. "Reading to Learn: Helping Students Comprehend Readings in Science Class." *The Science Teacher* 79 (1): 58–61.
- Hodkinson, P. M., and H. D. Hodkinson. 2003. "Individuals, Communities of Practice and the Policy Context: School Teachers' Learning in Their Workplace." *Studies in Continuing Education* 25 (1): 3–22.
- Hord, S. M. 2004. "Professional Learning Communities: An Overview." In *Learning Together, Leading Together: Changing Schools Through Professional Learning Communities*, edited by S. M. Hord, 5–14. New York: Teachers College Press.
- Hord, S. M. 2009. "Professional Learning Communities: Educators Work Together Toward a Shared Purpose." *Journal of Staff Development* 30 (1): 40–43.
- Hord, S. M., and E. F. Tobia. 2012. *Reclaiming Our Teaching Profession: The Power of Educators Learning in Community*. New York: Teachers College Press.
- Kellough, R. D., and N. G. Kellough. 2008. *Teaching Young Adolescents: Methods and Resources for Middle Grades Teaching*. 5th ed. Upper Saddle River: Pearson.
- Kensing, F., and J. Blomberg, J. 1998. "Participatory Design: Issues and Concerns." *Computer Supported Cooperative Work* 7 (3–4): 167–185.
- Kruse, S. D., K. S. Louis, and A. S. Bryk. 1995. "An Emerging Framework for Analyzing School-Based Professional Community." In *Professionalism and Community: Perspectives on Reforming Urban Schools*, edited by K. S. Louis, S. D. Kruse, and Associates, 23–44. Thousand Oaks: Corwin Press.
- Kwon, S. M., P. S. Wardrip, and L. M. Gomez. 2014. "Co-Design of Interdisciplinary Projects as a Mechanism for School Capacity Growth." *Improving Schools* 17 (1): 54–71.
- Lincoln, Y. S. 1995. "Emerging Criteria for Quality in Qualitative and Interpretive Research." *Qualitative Inquiry* 1: 275–289.
- Lincoln, Y. S., and E. G. Guba. 1985. *Naturalistic Inquiry*. Beverly Hills: Sage.
- Little, J. W. 2003. "Inside Teacher Community: Representations of Classroom Practice." *Teachers College Record* 105 (6): 913–945.
- Liu, K. 1996. "Annotation as an Index to Critical Writing." *Urban Education* 41: 192–207.
- Lortie, D. C. 2002. *Schoolteacher: A Sociological Study*. Chicago: University of Chicago Press.
- Louis, K. S. 1992. "Restructuring and the Problem of Teachers' Work." In *The Changing Contexts of Teaching*, edited by A. Lieberman, 91st Yearbook, 138–156. Chicago, IL: National Society for the Study of Education.
- McLaughlin, M. W., and D. Mitra. 2001. "Theory-Based Change and Change-Based Theory: Going Deeper, Going Broader." *Journal of Educational Change* 2 (4): 301–323.

- McLaughlin, M. W., and J. E. Talbert. 2006. *Building School-Based Learning Communities: Professional Strategies to Improve Student Achievement*. New York: Teachers College Press.
- Moir, E., D. Barlin, J. Gless, and J. Miles. 2010. *New Teacher Mentoring: Hopes and Promise for Improving Teacher Effectiveness*. Cambridge, MA: Harvard Education Press.
- Morse, J. M., M. Barrett, M. Mayan, K. Olson, and J. Spiers. 2002. "Verification Strategies for Establishing Reliability and Validity in Qualitative Research." *International Journal of Qualitative Methods* 2. Accessed June 4, 2012. <http://www.ualberta.ca/~ijqm/>
- Muller, M. J., and S. Kuhn. 1993. "Participatory Design." *Communications of the ACM* 36 (6): 24–28.
- NMSA (National Middle School Association). 2010. *This We Believe: Keys to Educating Young Adolescents*. Westerville: Association for Middle Level Education (AMLE).
- Pressley, M., P. B. El-Dinary, I. Gaskins, T. Schuder, J. Bergman, J. Almasi, and R. Brown. 1992. "Beyond Direct Explanation: Transactional Instruction of Reading Comprehension Strategies." *The Elementary School Journal* 92 (5): 511–555.
- Raphael, T. E. 1986. "Teaching Question Answer Relationships, Revisited." *The Reading Teacher* 39 (6): 516–522.
- Raphael, T. E., and K. H. Au. 2005. "QAR: Enhancing Comprehension and Test Taking Across Grades and Content Areas." *The Reading Teacher* 59 (3): 206–221.
- Reichstetter, R. 2006. "Defining a Professional Learning Community: A Literature Review." *E&R Research Alert*, no. 06.05. Accessed July 12, 2012. [http://www.wcps.net/evaluationresearch/reports/2006/0605plc\\_lit\\_review.pdf](http://www.wcps.net/evaluationresearch/reports/2006/0605plc_lit_review.pdf)
- Reiser, B. J., J. P. Spillane, F. Steinmuller, D. Sorsa, K. Carney, and E. Kyza. 2000. "Investigating the Mutual Adaptation Process in Teachers' Design of Technology-Infused Curricula." In *Fourth International Conference of the Learning Sciences*, edited by B. Fishman and S. O'Connor-Divelbiss, 342–349. Mahwah: Erlbaum.
- Roschelle, J., W. R. Penuel, and N. Shechtman. 2006. "Co-Design of Innovations with Teachers: Definition and Dynamics." In *Proceedings of the 7th International Conference of the Learning Sciences*, edited by S. A. Barab, K. E. Hay, and D. T. Hickey. Vol. 2, 606–612. Mahwah: Erlbaum.
- Saito, E., T. D. H. Khong, and A. Tsukui. 2012. "Why is School Reform Sustained Even After a Project? A Case Study of Bac Giang Province, Vietnam." *Journal of Educational Change* 13 (2): 259–287.
- Saito, E., H. Sumar, I. Harun, I. Kuboki, and H. Tachibana. 2006. "Development of School-Based In-Service Training under an Indonesian Mathematics and Science Teacher Education Project." *Improving Schools* 9 (1): 47–59.
- Saito, E., and A. Tsukui. 2008. "Challenging Common Sense: Cases of School Reform for Learning Community under an International Cooperation Project in Bac Giang Province, Vietnam." *International Journal of Educational Development* 28 (5): 571–584.
- Schuler, D., and A. Namioka, eds. 1993. *Participatory Design: Principles and Practices*. Hillsdale: Erlbaum.
- Servage, L. 2008. "Critical and Transformative Practices in Professional Learning Communities." *Teacher Education Quarterly* 35 (1): 63–77.
- Shapiro, R. B., and P. S. Wardrip. 2011. "Interactive Representations of Student Activity to Inform Teacher Collaborations: Results from a Formative Exploration." In *Computer Supported Collaborative Learning 2011 Annual Meeting Proceedings*, edited by H. Spada, G. Stahl, N. Miyake and N. Law. Vol. 1, 494–501. Hong Kong: International Society of the Learning Sciences.
- Sherer, J., K. Gomez, P. Herman, L. Gomez, J. White, and A. Williams. 2009. "Literacy Infusion in a High School Environmental Science Curriculum." In *Talking Science, Writing Science: The Work of Language in Multicultural Classrooms*, edited by K. Bruna and K. Gomez, 93–114. Mahwah: Lawrence Erlbaum.
- Shrader, G. W., J. Whitcomb, L. E. Finn, K. P. Williams, L. J. Walker, and L. M. Gomez. 1999. "Work in the Work Circle: A Description of Collaborative Design to Improve Teaching Practice." Paper presented at the Spencer Foundation conference on collaborative research for practice 1999, New Orleans, LA, March 11–12.
- Snow, C. E., and G. Biancarosa, eds. 2003. *Adolescent Literacy and the Achievement Gap: What do We Know and Where do We Go from Here?* Carnegie Corporation of New York



- Adolescent Literacy Funders Meeting Report. New York: Carnegie Corporation of New York.
- Stevens, W. D., J. Kahne, and L. Cooper. 2006. *Professional Communities and Instructional Improvement Practices: A Study of Small High Schools in Chicago*. Chicago: Consortium on Chicago School Research.
- Stoll, L., R. Bolam, A. McMahon, M. Wallace, and S. Thomas. 2006. "Professional Learning Communities: A Review of the Literature." *Journal of Educational Change* 7 (4): 221–258.
- Stuart, C., and D. Thurlow. 2000. "Making it their Own: Preservice Teachers' Experiences, Beliefs, and Classroom Practices." *Journal of Teacher Education* 51 (2): 113–121.
- Talbert, J. E., and M. W. McLaughlin. 1994. "Teacher Professionalism in Local School Contexts." *American Journal of Education* 102: 123–153.
- Visscher, A., and B. Witziers. 2004. "Subject Departments as Professional Communities?" *British Educational Research Journal* 30 (6): 785–799.
- Wardrip, P. S. 2008. "More than Heavy Lifting: The Role of Project-Based Learning in the Development of Professional Community." Paper to be presented at the Annual Conference of the American Educational Research Association, New York. March 24–28.
- Wardrip, P. S., and J. Tobey. 2009. "How Does Mechanical Weathering Change Rocks? Using Reading-to-Learn Strategies to Serve Science Learning." *Science Scope* 32 (5): 25–29.
- Wenger, E. 1998. *Communities of Practice: Learning, Meaning, and Identity*. Boston, MA: Cambridge University Press.
- Yin, R. 2003. *Case Study Research: Design and Methods*. 3rd ed. Thousand Oaks: Sage.
- Zywica, J., and K. Gomez. 2008. "Annotating to Support Learning in the Content Areas: Teaching and Learning Science." *Journal of Adolescent & Adult Literacy* 52 (2): 155–165.