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# Drawing on Metaphors of Teaching to Elicit Reflexive Thinking

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## **Drawing on Metaphors of Teaching to Elicit Reflexive Thinking**

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### **Abstract**

This paper describes the findings of a study that involved the generation of metaphors by practicing educators to promote reflexive thought, recognized today as one of the most viable and vigorous tools for troubling and influencing P-12 educational practice (Bolton, 2010). A total of 23 educators enrolled in an advanced graduate teacher education program beyond the masters level were first asked to construct a written (verbal) metaphor to depict their lived experiences as teachers and/or learners. Participants were then asked to create an original drawing to approximate their espoused metaphor. Educators' drawings were analyzed for apparent features and traits as well as fidelity to their written metaphor. Preliminary findings suggest that the process of identifying and producing a written (verbal) metaphor, augmented by the creation of its pictorial (i.e., drawing) counterpart, fosters deliberation around the work teachers do, challenges their thought processes and gives them varying degrees of agency as reflexive practitioners. Implications are discussed.

### **Introduction**

Why should we be interested in the teacher's ability to think reflexively? In an ever-increasingly constrictive and prescriptive teaching climate where it is crucial that educators think outside the box, question what they already know about their practice, and deliberate deeply on what they do, why they do it, and how they can improve it, what our schools need are reflexive educators - teachers who are poised to think nimbly, act with fluidity, and exert a willingness to "teach against the grain" (Cochran-Smith & Lytle, 1993) of institutional mores and practices. Increased scrutiny into the preparation of future educators, performance-based assessment of our beginning and long-practicing teachers, and professional development trends for those in academe as well as in P-12 education, has resulted from our continuing need to improve schools and the learning that takes place within them. It seems reasonable, then, to explore ways that prompt educators to re-conceptualize, challenge, and ultimately transform their practice (Hargreaves, 2003) by leveraging the same intellectual capital that professional teachers have been using to think about their practice for decades (Schoen, 1983).

In this study, teacher educators were asked to construct written (verbal) and pictorial metaphors (i.e., drawings) to represent their roles as teachers, their goals for learning, and the reflexive leanings (i.e., ideologies and philosophies) that ground their practice. The intent was to investigate verbal metaphor construction and pictorial representation of the metaphor – together – as thought-provoking tools for participants' self-understanding and self-realization of the work they do and how that work influences, and is influenced, by everyday practice.

### **Reflexive Thought and Metaphors**

When thoughtfully and thoroughly constructed, metaphors of teaching can reveal teachers' deepest beliefs and dispositions about practice as well as any gaps that exist (Patchen, & Crawford, 2011). As Bolton (2010) asserts, reflexive thinking is "[S]tanding outside of the self," or making aspect of the self strange, where the thinker incorporates the use of internal dialogue to examine one's beliefs and actions (p. xix.). Reflexive thought requires critically informed curiosity and flexibility to understand deeply held ways of being. The goal of reflexive thinking is coming as close as possible to an awareness of the way the individual is experienced and perceived by others.

Metaphor is no longer considered just a literary frill or linguistic device, nor is it considered merely poetic or fanciful language. As Lakoff and Johnson (1980) posit in their seminal work on metaphor, "[The essence] of metaphor is understanding and experiencing one thing in terms of another" (p. 3), reminding us that metaphors are pervasive in everyday life and the basis of one's conceptual system.

### **Framing the Study**

This investigation is framed around our assertion that P-16 educators have the potential, as well as capacity (Katzenmeyer & Moller, 2001), to think reflexively about their practice by "stepping outside oneself" (Bolton, 2010), vis-a-vis seeing "oneself as an other" (Geary, 2011, p. 2) in their pursuit to understand what they do in the classroom and why. As Berci (2007) contends, "through metaphor development and the narratives and research it can instigate,

[teachers] can increase not only their knowledge of the self, but that of their students and of their classroom experiences” (p. 85). The study was designed, therefore, to gain insight into how the construction of metaphors – both written and pictorial - can be used together to facilitate educators’ reflexive thinking by prompting them to deeply process, conceptualize, and express their beliefs as well as trigger the teacher’s ability to problematize their pedagogy.

A set of three major research questions was formulated to guide the current study:

1. How do educators depict, or represent, their professional role(s) as teachers, their goals for teaching and learning, and reflexive leanings (i.e., ideologies and philosophies) in the form of a written (verbal) metaphor?
2. How do educators depict, or represent, their professional role(s) as teachers, their goals for teaching and learning, and reflexive leanings (i.e., ideologies and philosophies) in the form of a pictorial metaphor (i.e., drawing)?
3. How consistent are the data across pictorial (i.e., drawings) and written (verbal) metaphors and what do these data suggest about what we can know about facilitating reflexive thought?

### **Drawings as Representative of Reflexive Thought**

In the last several decades, drawings as research tools have been likened to barometers of individuals’ cognitive and emotional development (Golomb, 1992) and have generally been regarded as telling and reliable (Wheelock, Bebell, & Haney, 2002). As Haney, Russell and Bebell (2003) argue,

In contrast to the lack of use of students’ drawings in educational research generally, during the last decade, we have found that asking students to draw a picture of one of their teachers at work in the classroom has proven to be a useful way of documenting changes in class-rooms undergoing restructuring, and a powerful means of helping teachers to reflect on and think about changing their classroom practice. (p. 11)

Haney et al. (2003) go on to suggest that drawings have the potential to elicit discussion from teachers about what is being taught, how, and foremost, why. In their study in one Massachusetts school, the researchers asked teachers to look for patterns in students’ drawings, (which depicted classroom practice), speculate about their causes, and think about how they would modify their practice based upon these depictions. Their participants’ responses indicated the depth with which teachers processed the data:

The drawings drew teachers into exploring questions such as how they could spend less time in front of the blackboard and more time with students, how they might structure their class-rooms differently so as to encourage students to focus more on each other and less on the teacher; and how the teachers could integrate more cooperative activities into their classroom. In short, the drawings proved an effective way to focus teachers’ attention on how they were teaching, how students were engaged in the classroom, and how the reform efforts were affecting their classroom teaching. (p. 264)

The impact that drawings have had, not only on teacher reflection and teacher perception, but also reflexive thought, has been documented in the literature. (Lifford, Byron, Eckblad, and Zieman, 2000; Sack, 1997; Wheelock et al., 2000). As Derry (2005) indicates, drawings show us how we perceive others and can be a mirror to view our perceptions of our “self” (p. 39). The author goes on to state that, “When drawings and text combine they have the potential to give the audience a multi-layered look at a phenomenon and help foster an embodied understanding...an alternative mode of knowing, a perspective that text alone cannot” (p. 40). Further, reflexive thought, or reflexivity, has been identified as a critical instrument for connecting study of self with study of “the other” (Smith, 1987), with which

...the researcher and the researched within a larger context can be probed and problematized. Reflexivity necessarily engages the self in critical exploration of experience, perceptions and positions; the insight gained into these can then be used as a starting point for engaging with others, and for starting to develop shared understandings of educational issues and strategies to address them. (Kirk, p. 239)

### **Methods**

It is generally recognized that research designed to tap individuals’ beliefs, perceptions, and other cognition is richer when mixed, or complementary methods, are utilized (Miles & Huberman, 2014). Therefore, this author

supports using drawings in conjunction with other methods of inquiry to attain a richer picture of what happens in classrooms. In addition, interpretation is highly subjective, despite our best efforts to attain inter-rater reliability.

#### Participants and Context

The current study was conducted at a large public university in the southeastern region of the U.S. The participants were 22 advanced education majors completing coursework beyond the Masters level, all of whom were academically engaged in the same degree cohort, but professionally connected to various workplaces outside the university. Among the 22 participants, 71% were female and 29% were male. Of the total number of participants, 61% were White; 3% were Asian and 33% were Black. All participants were professional practicing educators serving as elementary teachers (36%); middle school teachers (27%); high school teachers (33%); and school administrators (4%). All participants were in either their first or second semester of study. The average length of experience (in years) in a professional P-12 role was 12, with a range from three to 30 years.

#### Data Collection and Procedures

Qualitative methods were used to gain insight into how educators depict, or represent, their professional role(s) as teachers, their goals for teaching and learning, and reflexive leanings (i.e., ideologies and philosophies) in the form of first, a written (verbal) metaphor, and then, a pictorial metaphor (i.e., drawing). Candidates were asked to address the following prompts: (1) Describe in writing your metaphor of teaching, making parallels or comparisons between the role of the teacher, students, and any other of the contexts of learning/teaching with aspects of your chosen metaphor; and (2) Draw a picture depicting your metaphor of teaching, making parallels or comparisons between the role of the teacher, students, and any other of the contexts of learning/teaching with aspects of your chosen metaphor.

Written data were collected electronically by the principal investigators and stored on a password-protected site in one of the co-researcher's office and stored on a password-protected computer. Pictorial data (i.e., drawings) were also collected electronically and stored on the same password-protected hard drive and password-protected site as the written data. First the pictorial data were analyzed using analytic coding, followed by the written data, which were analyzed using constant comparative analysis, which continued as a cognitive map, or schema, based on emerging "repeatable regularities" (Kaplan, 1964). The research findings are based primarily on data obtained from these two data sources. Where personal names are ascribed to individual statements, pseudonyms have been used.

#### Data Analysis and Coding Schemes - Drawings

Emergent analytic coding was used to analyze the pictorial data using four levels of abstraction: (1) Emergent/Analytic-Basic Features; (2) Traits Coding; (3) Holistic Coding; and (4) Holistic Analysis or Interpretation. A fifth level of analysis, Metaphorical Analysis, was introduced in this investigation to provide the raters conducting the analysis an opportunity to note the consistency of the pictorial (i.e., drawings) data and written (verbal) data and what these data might suggest about what we can know about facilitating reflexive thought (Haney, et al., 2003, p. 253).

#### Emergent Analytic Coding – Basic (Features Checklist)

This checklist served as a draft-coding sheet on which each rater (three total) coded the absence or presence of particular features within each individual drawing (Table 1). The coding results for all three raters were then compared, and for features that showed high levels of agreement (the % of agreement between raters, or the % of cases in which three independent raters agreed in their ratings of a set of drawings), more formal descriptions were developed (Haney et al., 2003, p. 253). An example of a pictorial metaphor (drawing) can be seen in Figure 1. It is this drawing that will be used to illustrate the five levels of abstraction and analysis.

#### Traits Coding (Traits Checklist)

The Basic Coding, or Features Checklist, was taken to the next level by coding the drawings at a higher level of abstraction. Known as Trait Coding (Haney et al., 2003, p. 253), the two co-researchers and student assistant returned to the drawings to rate them according to the extent to which a certain trait was portrayed (i.e., "what did we see?"). Again, coding results for all three raters were compared and new categories were added as appropriate (Table 2).

Table 1: Level 1 (Emergent) Coding - Features Present in Pictorial Metaphor Featured in Figure 1.

Feature Represented	Rater 1	Rater 2	Rater 3
tent	+	+	+
Ringmaster with label	+	+	+
box	+	+	+
clown	+	+	+
elephant balanced on ball	+	+	+
ball has label	+	+	+
3 rings with labels	+	+	+
balls being juggled	+	+	+
3 balloons with labels	+	+	+
flag on tent	+	+	+

Figure 1. Pictorial metaphor example, Under the Big Top: Learning is a Circus.



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Table 2. Level 2 Trait (Analytic) Coding of Pictorial Metaphor Featured in Figure 1

Analytic Traits	Rater 1	Rater 2	Rater 3
Ringmaster (teacher) is standing on box juggling balls	+	+	+
Ringmaster in foreground of picture	+	+	+
Ringmasters has facial features	+	+	+
Clown holding balloons labeled “state standards”, “district”, “local admin”	+	+	+
Clown has facial features	+	+	+
Clown’s shirt reads “humor”	+	+	+
Small elephant balanced on ball labeled “learner”	+	+	+
Elephant on ball in background of picture	+	+	+
1 ring labeled “curriculum”	+	+	+
1 ring labeled “pedagogy”	+	+	+
1 ring labeled “daily operations”	+	+	+
tent is labeled “learning”	+	+	+

Holistic Coding (Holistic Checklist)

Traits that showed somewhat high levels of agreement were transferred to a Holistic Checklist (Table 3), where judgments about the overall aspect of a situation (i.e., “what could it mean?”) were recorded. For example, in the sample drawing where the elephant (i.e., student) is perched precariously atop a beach ball (i.e., learning), the raters unanimously agreed that a negative trait was being depicted, but also agreed in their initial interpretation of the drawing that this was a portrayal of the student as an expendable commodity; that is, the individual who could lose his balance and knowledge and/or skill acquisition (“learning”) all at the same time. Despite the highly subjective nature of this coding process the raters achieved 100% agreement in independent ratings on the Holistic Checklist.

Table 3. Level 3 (Holistic) Coding of Pictorial Metaphor Featured in Figure 1.

Holistic Coding	Rater 1	Rater 2	Rater 3
Ringmaster (teacher) juggling balls that approximate “Daily Operations,” “Pedagogy,” and “Curriculum”	+	+	+
Ringmaster looks worried and anxious (furrowed brow, mouth open)	+	+	+
Ringmaster is concerned about much more than just the learner	+	+	+
Elephant is small in comparison to ringmaster and clown	+	+	+
Elephant is on learner ball perched precariously trying to balance out of the sight of the ringmaster	+	+	+
Clown holding “state, local, district” balloons diminishes the stature of standards and administration	+	+	+
Tall hat on ringmaster/teacher suggests tall orders; tall tasks	+	+	+
Opening in the tent reveals only part of the circus	+	+	+
Balloons (standards, administration) can pop (change) at anytime	+	+	+

Holistic Analysis or Interpretation

Also known as Holistic Review (Haney et al., 2003), at this level of abstraction, the raters move from a stance of possibility to one in which they feel more confident that what they are seeing in the drawing is likely consonant with the intended meaning of the participant (Table 4).

Table 4. Level 4 - Holistic Interpretation of Pictorial Metaphor Featured in Figure 1.

*The teacher is at the center of the learning process and is required to balance pedagogy, daily operations, and curriculum. The teacher may lose sight of the learner who is sometimes left to fend for himself. The metaphor makes a mockery of standards imposed by state, district, and local entities.*

When all the drawings were coded by the co-researchers and student assistant, a fifth and final level of coding, Metaphorical Alignment (or Alignment), was conducted. All three raters reviewed the pictorial data (i.e., drawings) for each participant and then reviewed the corresponding written (verbal) data for consistency in terms of the espoused metaphor. In other words, raters asked themselves whether a participant's drawing conveyed or depicted the same message as the written (verbal) metaphor. The raters at this level using the following questions:

1. What is being depicted in the drawing?
2. What is being described in the written metaphor?
3. How are these two data sets consonant or opposite?
4. Has the participant provided evidence of reflexive thought in the construction of either? How do you know?

#### Inter-rater Reliability and Consensus Estimates

Stemler (2008) has offered a reliability technique – known informally as consensus estimates of interrater reliability - which may be used when the researcher(s) are interested in examining the degree to which two or more independent raters can “come to exact agreement about how to assign scores to observations (or participants) based on a pre-established scoring protocol, rubric, or checklist” (P. 1). In the interest of maintaining fidelity to the qualitative paradigm, the authors decided to frame their level of concordance or uniformity as checklists of agreement among three raters, versus computing the reliability using kappa coefficient of agreement.

### Findings

In this investigation, researchers sought to understand how educators depict, or represent, their professional role(s) as teachers, their goals for teaching and learning, and reflexive leanings (i.e., ideologies and philosophies) in the form of both written (verbal) and pictorial metaphor (i.e., drawings). Preliminary findings from the current study suggest that the process of creating metaphors about practice troubles thinking and gives the educator agency as a reflexive practitioner at an emergent level. As Chen (2003) contends, no single metaphor is perfect. A teacher should be a chameleon in that s/he can “harmonize with the environment and adopt different metaphors and roles as needed” (p. 30).

The current investigation indicated a number of themes or patterns in the data in which the message(s) inherent in the pictorial and written metaphors were judged by the raters to be largely consistent or parallel. For example, in the drawing depicting “teacher-as-interpretive artist” (Figure 2), the raters noted the significant amount of symbolism (e.g., students as audience, teacher as conductor, score as curriculum), derived reflexively and in concordance with the espoused (i.e., written) metaphor:

Figure 2 Teacher-as-Interpretive Artist



Teaching might very well be the oldest form of performance art...textbook and assorted readings serve as the score, and the goal is to convey the full emotional and intellectual weight of the content so that each audience member leaves changed” (Hughes)

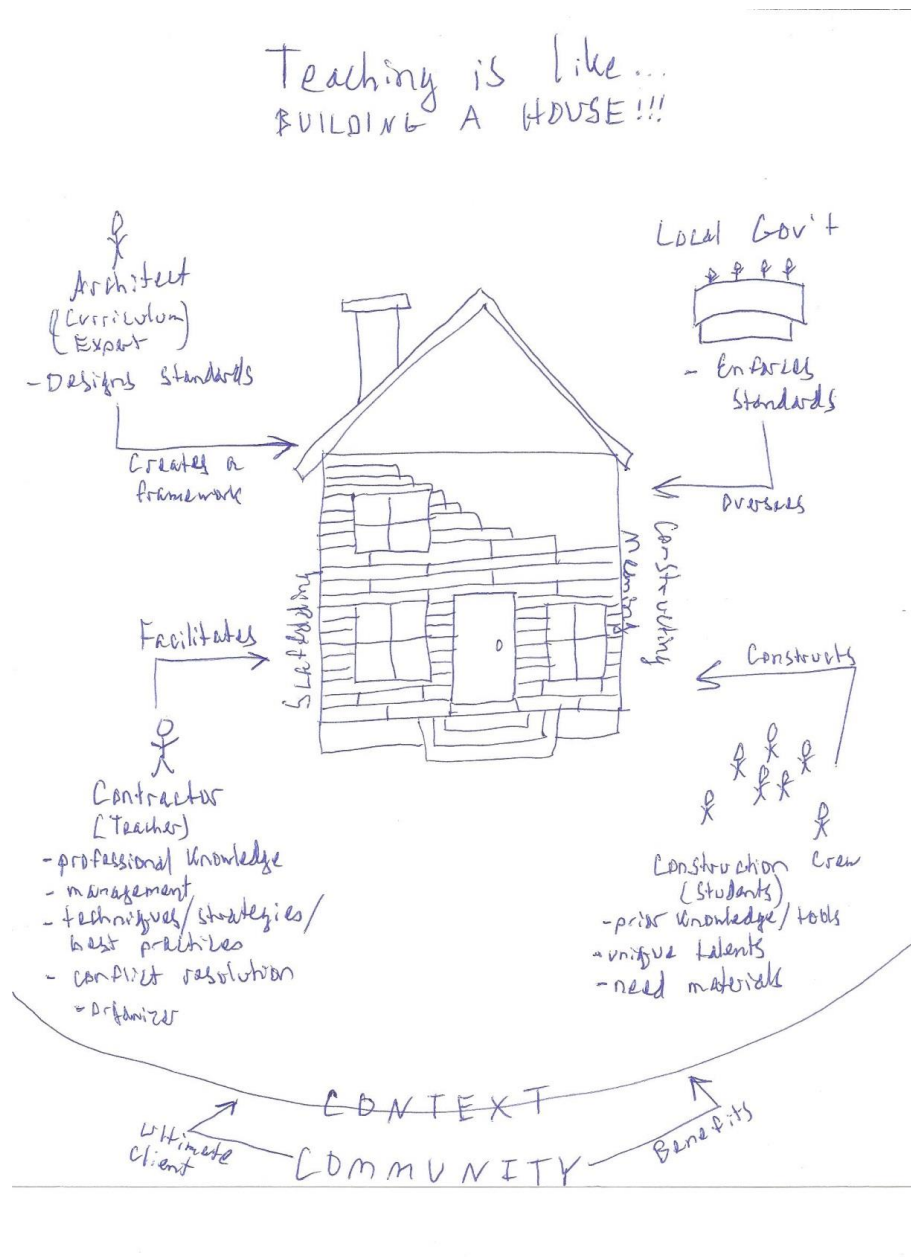
In this excerpt, one notes the consistency between the pictorial (drawing) and the written (verbal) metaphor. Reflexive thought is invoked in the participant’s claim that the goal of learning is for the audience (i.e., students) to leave “changed,” which is in concordance with a behaviorist concept of learning, that of “changed behavior.”

In another example, the espoused metaphor of teaching-as-house-building (Figure 3) is referenced consistently across the written and pictorial metaphor. The respondent depicts a partially-built house surrounded by workers at all four corners of the house. In this drawing, which utilizes abundant labeling, the curriculum expert is represented by the architect; the teacher is represented by the contractor; the students represent the construction crew; and the construction of meaning is represented by the building of the house. As the espoused metaphor reads, ...let us consider the role of the teacher as a contractor and the role of the students as workers...let us consider the home as the sum of all constructed learning and meaning in the classroom, and let us consider the contractor, the workers, and others as participants in the learning process. (Strait)

In this excerpt, the written metaphor is considered consistent with the pictorial metaphor, both of which show evidence of reflexive thought, symbolism, pedagogical awareness, the directionality of the learning process, and suggest that each entity works in harmony as a cohesive unit. Of the 23 metaphors rendered, 19 written/drawn metaphor sets were rated as consistent, (i.e. they conveyed a consistent message).



Figure 3. Teacher-as-builder



### Metaphors Depicting Sports and Outside Activities

Ten of 23 metaphors generated were grounded in athletics or outside activities. Teacher-as-mountaineer, teacher-as-pace-runner, teacher-as-hiking guide, teacher-as-spin class instructor, and teacher-as-ski instructor are some of the examples that participants used to depict the *teacher-as-other*. One metaphor, in particular, labeled teacher-as-coach, depicted the teacher (coach) at the center of the drawing with three burly males in the forefront (the players) and a game plan that the respondent likened to a teacher's plan book. The drawing was generously labeled ("modifying," "goal," "planning," "interest," "progression," "walk-throughs," and "teamwork," all of which are typically expressed within one's practice). Arrows indicated intent, directionality, process, intent, reflection, and relationships between the teacher (coach) and the students (players). Not surprisingly, this drawing offered more reflexive thought than did the written metaphor. Reflexive thought was, however, equally evidenced among the written and pictorial data; in some

examples, the written metaphor showed evidence of greater reflexive thinking than did the drawing, and vice versa.

#### Impact on One's Own Practice

Participants were particularly attuned to their role as teachers and internalized their roles in the construction of their written and pictorial metaphors. Statements such as, "The teacher has to reflect on his or her teaching to ensure that the students' learning environment is positive, safe, and engaging" and "The teacher wants her students' learning to be memorable so they will be motivated to be lifelong learners" were commonly given. Further, in their written metaphors (which were, on occasion, far more elaborate than the pictorial counterpart), participants often explained their efficacy in the classroom, as in the case of teacher-as-chef. As this participant explained in his written metaphor:

The customers [students] are willing to leave their comfort zone if they have had a pleasurable previous dining [learning] experience at that restaurant. A student who has participated in meaningful lessons will be more likely to take risks with a teacher because that same trust exists.  
(Sipto)

As these data suggest, the majority of the participants moved in the direction of developing deeper and broader understandings of their practice and its impact on both their academic and personal lives through collaboration and targeted social and verbal interaction with colleagues and mentors at the university and P-12 levels.

### Discussion

Findings suggest that when teachers are challenged to deliberate deeply on their work, they can use reflexive tools – both verbal and non-verbal - to construct representations of their thinking. The development of a metaphor is a pervasive activity and the basis of our conceptual system (Lakoff & Johnson, 1980); that is, the essence of the metaphor lies in understanding and experiencing one thing in terms of an "other."

In this study, participants' drawings often elevated the written (verbal) metaphors, giving them clarity and bringing power to their message. For example, in the written (verbal) depiction of "teacher-as-pace-runner," the participant, personalizing her beliefs about education, wrote eloquently about the negative effects of standardized testing and competition in U.S. classrooms. This participant's drawing, however, evoked a more powerful message among the raters, even though the metaphor was consistent across both data (i.e., the written version and the pictorial version depicted the same metaphor). The drawing evoked a visceral response— far different from the response evoked by the participant's written metaphor, and provided greater elaboration than its written counterpart. Several written and pictorial metaphor pairs, in fact, provided evidence of this. We assert that, taken individually, the written (verbal) metaphor and the pictorial (drawing) metaphor depict some level of internalization (Vygotsky, 1978) and expression, and contribute to our understanding of metaphor as reflexive thought. Taken together, however, the written and pictorial data provide us with a compelling look into one's reflexive thinking and make visible the teacher's ability to embody herself as "other" (Geary, 2011).

Also noted was evidence that the participants in this study frequently problematized - or "troubled" - the *field* of education rather than their own practice. This may be in part due to the participants' desire to put distance between him/her and his/her practice. Participants may have felt it is less threatening to conceptualize the world of teaching rather than their own practice, finding that "deflecting," rather than reflexing, was a safer activity. One participant, for example, labeling her written and pictorial data, "teacher-as-ski-instructor", constructed a metaphor describing and depicting the elements of teaching and learning in a consistent manner, likening the act of learning to the act of skiing: the more one practices, the better one becomes. This metaphor was not seen by the raters as particularly reflexive, especially given that there was no evidence that the participant had troubled her own practice, but relied instead on a pedestrian adage, "practice makes perfect."

Reflexive thinking was prominently evidenced in the metaphor, "teacher-as-gardener," where the participant generated a drawing depicting the gardener (teacher), "watering" or growing her students' achievement (students were depicted as flowers) but supplying the flowers with sustenance (i.e., water), represented in this drawing by classroom parents. The participant's drawing was in concordance with the written (verbal) metaphor and showed evidence of problematizing one's practice (the teacher values the parents of her children, feels connected to them, and brings them into the growth process, even in the event of a drought). This is a powerful example of the respondent's ability to see herself as "other." As if to punctuate the importance of generating both written and pictorial metaphor, the participant offered the following: "[Constructing] a metaphor is an active process which is at

the very heart of understanding ourselves, others, and the world about us and it need not be limited to verbal expressions” (Lawley & Thompkins, 2000).

Finally, the authors acknowledge that while there is support in the literature using drawings as a investigative tool (Haney, Russell, Bebell, 2003; Sack, 1997; Wheelock, Bebell, & Haney, 2000), they concede that the methodology is not widely used within qualitative research. Interpretations are subjective and can vary widely. Drawings can be ambiguous and respondents can misinterpret a prompt or incorrectly recall information or events. So, too, the authors contend, do participants who are interviewed and audio-taped. Despite these limitations, drawings remain a compelling, accessible data source for making life visible. Drawings can and do provide a visceral glimpse into human inquiry, performance, and self-evaluation that other qualitative methods standing alone do not, as this investigation suggests.

The findings from this study hold implications for teaching and learning across all levels and contexts of P-16 education. Today’s P-12 schools must generate thought capacity in order to stay ahead of factors such as competing in a global market and high stakes testing (Hargreaves, 2003). Teachers continue to face immense pressure to perform from a variety of stakeholders including parents, local and national leaders, and the media. Leveraging teachers’ abilities, actions, and intentions (Katzenmeyer & Moller, 2001) is more critical than ever given our penchant to hold educators ultimately responsible for nearly every aspect of their students’ success. Now is the time to empower our teachers with the tools, the opportunity, and the purpose to really own their practice.

### Conclusion

With the national call for teachers at all levels and within all contexts to improve P-12 student learning by actuating change, teachers need to engage in deep deliberation and self-study if they want to make improving their practice their priority. The reflection process, a mainstay of teacher education programs across the U.S., has fallen woefully short of producing educators who are able to engage in a continual process of self-examination and reflexivity. Professional educators need to move beyond gazing “into the mirror.” They need to look “through the mirror” in order to trouble, or problematize, their practice (Bolton, 2010). Although the very concept of looking through the mirror can be unsettling, teachers must embrace reflexive inquiry as an integral part of their practice. And while teachers are likely to realize varying degrees of agency as reflexive practitioners, we assert that every small step towards reflexive thought, as our participants learned in this investigation, is a step in the right direction.

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