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Abstract

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Keywords

metaphor methodology, metaphor analysis, collaboration, trustworthiness

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Collaborative Metaphor Analysis Research Methodology: A Retrospective Self-Study

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The purpose of this manuscript is to explicate the metaphor analysis process we employed in a recent study to make this methodology more accessible to future researchers. To explain and demystify metaphor analysis as a method, we describe in detail the three rounds of data analysis leading to findings. We seek to make transparent the messiness and thoughtfulness of the refining process as well as the methodological rigor and trustworthiness. In the discussion that follows, researchers share experiences with and resulting insights into the methodology in hopes of providing future researchers with support for their own metaphor analysis work.

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Introduction

This paper focuses on the process of collaborative metaphor analysis as a research method with the goal of providing insight into the methodological process for potential researchers. We were spurred to write this paper after sharing our findings of a recent study during a conference presentation in which participants were intrigued by the process. We initially approached this work as a descriptive how-to guide so that others might be encouraged to engage in this research method. However, we soon realized that our collaboration was so intricate and generative it warranted self-study of our processes (Cole & Knowles, 1998; Pinnegar & Hamilton, 2009; Strong-Wilson, 2006). Thus, we embarked on a rigorous retrospective self-study of our collaborative metaphor analysis processes so we could even better understand and articulate, for ourselves and others, how collaboration leads to sturdiness of findings in metaphor analysis. The purpose of this study is to make transparent the messiness and thoughtfulness of the refining process as well as the methodological rigor and trustworthiness. We follow the explication of our processes with discussion about insights gained, benefits and challenges, and suggestions for other researchers interested in using metaphor analysis methodology.

Since this methodology manuscript is a result of a specific research study, we begin with the context and brief explanation of that initial research. Following, we present our literature review that defines metaphor and describes metaphor analysis. Then we describe our retrospective self-study method followed by our step-by-step process of metaphor analysis as a research method. We include excerpts of data and clarifying notes to illustrate our thinking, collaboration, analysis, changes, and tensions along the way. In our findings and discussion, we zoom in on the vigorously interactive and complex collaboration between researchers. We conclude with researcher reflections sharing what we learned about the metaphor analysis methodology that may be of use to future researchers.

Context of Research Study

The initial research study (currently under review) employed collaborative metaphor analysis to examine how 41 pre-service teachers' (hereafter PTs) conceptualize themselves as readers. We define a Reader as a person who engages with text for meaning. The text may include environmental (e.g., billboards or cereal boxes), school (e.g., textbooks), personal (e.g., books, social media), or work (e.g., how-to manuals). The amount of engagement with a text in any format can vary on a continuum from reading only what is essential and necessary to constant reading as a passion. The Reader's ultimate purpose is to gain meaning and understanding from the text, and for those who read as a passion, they also find enjoyment in the process.

The pre-service teachers in our study have had at least 20 years of experiences with reading through which they have constructed complex schema, or frames (Lakoff, 2014), organizing what they know and understand about the nature of reading. These conceptualizations go well beyond definition and operationalization to include roles and purposes, objects to and with which we "do" reading, feelings associated with reading and learning to read, knowledge about how reading works and how one learns to read, etc. In our society reading and learning to read is closely intertwined with schema for school, perhaps even more powerfully for these preservice teachers. Lakoff (2014) notes that complex concepts are understood through multiple conceptual metaphors that offer different understandings of the concept (p. 2). Teachers' schema as Readers can impact their personal reading behaviors (Perrow et al., 2020), which also impacts their dispositions about teaching reading. Furthermore, the constructed conceptualizations about reading and teaching reading preservice teachers bring to the teacher education classroom influence the ways they learn to teach, as new knowledge and experiences must be vetted against the schema they bring to the table. The result is that some PTs' frameworks of reading easily accommodate what we teach, but for others the process may be a struggle to evaluate and accommodate new perspectives.

In the initial longitudinal study, the PTs were enrolled in three sequential literacy method courses over three semesters: (1) Children's Literature, (2) Teaching Reading, and (3) Literacy Assessment and Instruction. None of the authors who are teacher educator researchers taught these sections of the classes, but as long-term, tenured professors, they know the program well, are instrumental in course development and mentoring of instructors, and often teach the courses as well.

At the beginning of each semester participants were given a metaphor prompt, "As a reader, I am a walker/jogger/runner and here is why." A walker was described as a person who reads when it is necessary. A jogger was described as a person who enjoys reading and may or may not have a book in progress but does engage in the process. A runner was described as a person who is a reader for the long haul; it's a lifestyle and the person can't imagine a life without reading.

They were asked to choose the metaphor that best fit their perceptions of themselves and to explain the reasoning behind their choice. These responses became our data source for the initial study. We examined the total sum of PTs walker/jogger/runner metaphors (N=41 x 3 metaphors = 123 metaphors) for reading and carefully considered the meaning behind their reasoning. As individual learners took all three classes, a second stage of our analysis involved comparing individual responses (coded as numbers with class; for example, participant number 34 would have three responses, 34CL, 34TR, and 34LA&I) across the courses, with consideration of changes in their responses.

Through three rounds of analysis (explained as the focus of this paper), we identified four core metaphor themes:

- Reading is a destination, something they must get through to get to a goal. How they get through it (both success and affect) depends upon their capacity, propensity, and the nature of the environment.
- Reading is something important they do. How well and how often they do it and how they feel about doing it depends upon perceived ability and facility, attitude and commitment, the extent to which they have control, and the time they have available.
- Reading is a valuable commodity, something worth seeking out and holding on to. Many saw this commodity as not easily accessible, with attainment related to agency, desire, and capacity.
- Reading is a container. These readers worked to get into the container to get out meaning, entertainment, or success.

The findings of the initial research study are presented in another manuscript. The focus of this manuscript is to use retrospective self-study to address research methods. Therefore, we sought to answer the question: How did the role and nature of collaboration influence the process of metaphor analysis as a research method?

Literature Review

Metaphor, in metaphor analysis, is more than a linguistic unit. According to Lakoff and Johnson (1980), metaphor is a principal system of mind. Humans mentally structure understandings, perceptions, and experiences through metaphor. Neurologically, our brain stores our experiences in its neural circuitry and bundles them together to form concepts, or schema, that we use to understand the world. Metaphors are part of this neural construction; therefore, metaphors are part of humans' conceptual system (Lakoff, 2014). We define a conceptual metaphor as a word (or group of words) that characterizes "a domain of thought" (Lakoff, 2014, p. 1). A domain is an organized frame for schema, which is how people mentally structure and organize knowledge.

Metaphors are comprised of source and target domains (Kövecses, 2010). A source domain is a familiar or known concept, is typically concrete, and is often the place (or source) where we get our metaphor. In contrast, the target domain is more abstract, unclear, or vague. The target is where new insights and illumination become known. For instance, love is frequently conceptualized in metaphor. When love is the target domain, various source domains call our attention to varied experiences of love, positive and negative. If love is a battlefield, our attention is called to the tensions and difficulties. If love is a rose, we note the juxtaposition of pleasure (fragrant petals, beautiful flower) and pain (thorns that may prick us or that we want to avoid). "Love is heaven" turns our eyes and hearts only to the pleasure and rewards.

Metaphor analysis has gained greater interest over the past few decades, stemming largely from Lakoff and Johnson's (1980) work articulating the inextricable relationship between metaphor and cognition. Essentially, they assert, we make sense of the world and our experiences in them through metaphor. "Since communication is based on the same conceptual system that we use in thinking and acting, language is an important source of evidence for what that system is like" (Lakoff & Johnson, 2003, p. 3). Schmitt (2005) asserts that Lakoff and Johnson's work provides "a comprehensive concept of metaphor, which enables the reconstruction of cognitive strategies of action" (p. 359). Thus, analyzing metaphor use offers insights into the meanings individuals make and act upon as they go about their daily lives. Because metaphorical meanings emerge from experience, analysis requires sensitivity to context. Lakoff and Johnson articulate three broadly overlapping categories of conceptual

metaphors that influence and reflect our deep experiences with the world and, thus, our metaphorical thinking. These categories are "orientational" metaphors involving spatial relationships (e.g., "up" is good, and "down" is bad; also in/out, on/off, etc.), "ontological" metaphors in which a lived experience (e.g. an emotion or activity) is understood as something concrete (e.g., a container, substance, or person," and "structural" metaphors in which a (usually) more abstract concept (schooling, for instance) is mapped onto another structured, detailed concept (such as factory). Metaphor use is diverse and creative, but metaphors usually fit into these broad categories in some way.

Multiple iterations of metaphor analysis as a methodology appear in the literature, with distinctions as to how metaphors are gleaned, and analysis is approached. The way researchers seek, find, and analyze metaphors varies. In some studies metaphor is generated by prompt, either broad invitations to offer metaphors or invitations to respond to select potential metaphors. In others, narrative -- written, oral, or imaged; existing or invited -- is explored to reveal metaphors (Brown, Parsons & Worley, 2006). A common analysis method utilizes cognitive linguistics (Cameron & Maslen, 2010; Kövecses, 2010), which emphasizes how language is used in specific social interactions. Additional methods include content analysis (e.g., Ball & Smith, 1992; Moser, 2000), thematic analysis (e.g., Riessman, 2008), narrative inquiry (e.g., Craig, 2018), and systematic metaphor analysis (Cameron & Maslen, 2010; Maslen, 2016). While there is both an international (e.g., Graham Low, Lynne Cameron, Researching and Applying Metaphors Conference) and national (e.g., Sonya Armstrong, Eric J. Paulsen, Margaret Perrow) interest in metaphor research, there is also great variability in approaches to data analysis. Thus, a common call for scholars is to make metaphor analysis processes more transparent (Beckett, 2014; Cameron & Maslen, 2010; Redden, 2017). Our work here answers that call, explicating our research process to make it more accessible to future researchers.

Self-Study

Our work employs self-study methodology to explain and demystify metaphor analysis as a method. We begin with the positioning of the authors as researchers. Following, we explain self-study as the method we employed as we unpacked collaborative metaphor analysis.

Researcher Positionality

There were four researchers engaged in metaphor data analysis, two experienced (Drs. Shaw and Parsons) and two novices (Dr. Vasinda and a doctoral candidate), all four literacy educators at a major university. The experienced researchers had independently worked with and published metaphor analysis research multiple times in the past (Brown, Parsons, & Worley, 2006; Parsons, Brown & Worley, 2004; Shaw & Andrei, 2019; Shaw & Mahlios, 2015). This was the first experience in metaphor analysis for Dr. Vasinda and the second experience for the doctoral candidate. Since it was the first time the experienced researchers collaborated on metaphors, there was a lot of questioning and cross-checking amongst the two of them regarding conceptualization of and approach to the method. While the three faculty researchers shared responsibility for the research project, the experienced researchers also mentored both the novice faculty member and the doctoral candidate in methodology. Throughout the study, the novices' questions served as opportunities for the seasoned researchers to clearly consider and clarify processes, intentions, and goals. This productive tension caused the experienced researchers to critically consider their own familiar processes and assumptions about metaphor analysis methodology, questioning their own assumptions and making deliberate decisions about methodological moves and interpretive stances. Not only did this collaborative process contribute sturdiness in the research findings, but it also served as a methodological map of the research process. Although the doctoral student is a co-author of the initial study of the data and another metaphor analysis study with the first author, time constraints of working on her dissertation research prevented her from contributing as an author of this self-study manuscript.

Self-Study

Self-study (Cole & Knowles, 1998, Pinnegar & Hamilton, 2009, Strong-Wilson, 2006) is a reflective research practice that turns the lens from the data analyzed to the researcher and research process itself, seeking to understand and make visible aspects of the process that may have been hidden in assumption or cloaked in false certainty of process. Strong-Wilson (2006) notes, "self-study is characterized by a certain methodological persistence, a relentless returning to the site of investigation" (p. 60). Although self-study findings are typically for private use (Cole & Knowles, 1995), our goal is to make our processes public to provide clarification of metaphor analysis methods so that others might engage in this type of research that offers metaphors as a lens of additional insight. In the private sense, examining our process helped us more deeply understand it. In the public sense, we can better articulate and describe the methods in service to other researchers. In the section below, we describe our self-study methodology, contextualize it with a brief description of the metaphor analysis study, then share insights gained from "going back in" to closely examine our collaborative process.

Messy processes are challenging to articulate which is why some qualitative methods are shrouded in mystery. To study our process, we used our detailed research meeting notes as data, returning to the beginning of our study and observing the work from the outside. We considered together the interpretive steps and moves, noting points of significant growth, insight, and adaptation. We examined our experiences as researchers at each point, including roles individual researchers took on (leading or questioning interpretation, for instance). We noted points of interpretive tensions in the process and considered how they were resolved. Once we had examined and talked through the process from the beginning to the end, we used the notes from this dialogue as data, employing collaborative coding to identify and articulate relevant themes.

Revisiting our process called for us to step out and away, looking back on the action from beginning to end as informed and critical observers, asking ourselves what happened here and what was the result. The stance may be compared to athletes reviewing performance videos to understand how their movements and decisions led to outcomes in hopes of increasing awareness to inform future actions. In the following section, we articulate our observed process in detail from beginning to end, providing examples of, and artifacts (notes, codebook excerpts, and tables) related to, data collection and analysis, illuminating the results of our collaboration. Our goal for this section is to make our step-by-step process transparent for researchers.

In the findings and discussion that follows, we share insights into the metaphor analysis process we gained because of our self-study.

Collaborative Metaphor Analysis: A Process Observed

The nature of metaphor—chosen and personal to the speaker, grounded in shared experience but often masked by assumption—requires great care with analysis. All research tasks were completed together. Therefore, we embarked upon collaborative analysis, meeting together via Zoom video conferencing once a week. Zoom allowed easy logistical collaboration between two campuses and the ability to record sessions to document the process. The analysis work was dialogic in nature. As researchers, we bounced multiple possible interpretations

against each other to interrogate assumptions about reading in each narrative and, thus, created a trusted space so when a researcher questioned one's interpretation of a metaphor the ensuing discussion strengthened our decision. Longitudinal data were collected and analyzed over approximately three years. We analyzed metaphors from the Children's Literature course first, Teaching Reading data second, and Literacy Assessment metaphor data last. Regardless of the timing of data collection we followed an analysis process that included three rounds, which is based on the research of Kövecses (2010) and Armstrong (2007). Round One focused on unpacking the metaphors and identifying conceptual metaphors. During Round Two, we conceptually grouped metaphors. In Round Three, we refined and regrouped for metaphorical coherence.

Round One

The purpose of Round One was twofold: (1) to unpack each walker/jogger/runner metaphors for its interpretation, and (2) to identify conceptual metaphors. To "unpack" the selections/statements we considered the two parts of a metaphor: source and target domains (Kövecses, 2010). In our study, the target domain is "As a reader I am" [with explanation] because for many PTs, their identity as a reader may be undeveloped, vague, or abstract. In this research study, we gave the PTs three choices for the source domain: "walker, jogger, runner." These three terms are concrete and familiar. The follow example was written in Children's Literature by Student ID #74: "As a reader I am a runner because I am always hungry to learn so I love to ask questions or google things or read about different topics."

Target domain	As a reader I am always hungry to learn so I love to ask questions or google things or read about different topics.
Source domain	runner

In Round One, we examined how the three walker/jogger/runner metaphors the PTs used to describe their engagement with reading revealed their conceptualizations of the reading act. Through this initial unpacking process, we noted our thinking about each metaphor, considering at once the prompt selection, the narrative explanation, and the tone of the response which we coded as positive, negative, or in-between. Two examples of the thought process are shown below. In each table below the first row is the actual metaphor the PT wrote. The second row is our unpacking of the metaphor. The third row shows our interpretation and thus our stated conceptual metaphor (that is, a word or group of words that creatively describes and illustrates an idea or thought).

PT #36 Children's Literature I am a jogger because I love to read. I can finish books generally fast. I go through phases where I read 4 books in a week but stop reading for a couple of months. Since I take time off reading, my reading slows until I pick it back up for a few weeks. [color coded green for positive tone]

Our unpacking/interpretation: Intermittence is why she listed herself as a jogger rather than a runner. She equates pleasure and it balances out to the middle/jogger. Sometimes I'm a walker (time off reading) and sometimes a runner (read 4 books in a week) so she chose jogger which is in the middle. (Jogger is the average like "how many days do you exercise each week? Parallels to this). Only books count as reading and reading is for pleasure. She discounts coursework reading (reading to learn stance).

Conceptual Metaphor: SEASONAL WORKER

PT #42 Children's Literature I am a walker because I often get distracted and forget what I am reading. [color coded blue for negative tone]

Our unpacking/interpretation: Needs lessons on monitoring reading. She knows herself as a reader. Distractions make reading methodical and slow. She has to repeat and start over. Learning is inferred. Maybe she hasn't been hooked so she doesn't get distracted.

Conceptual Metaphor: READER AS MEANDERER

As we worked through the PTs varied and sometimes similar responses, we worked to refine our articulation of the conceptual metaphor. This process was vigorously interactive; each potential conceptual metaphor was subjected to challenges and proposed metaphors were continually connected back to the original narrative to ensure coherence. New instances that seemed to fit previously proposed conceptual metaphors were used to refine the articulation of that conceptual metaphor. In this first round of analysis, we identified and defined 27 metaphors for the data (refer to Table 4).

Table 127 Conceptual Metaphors and Collaborative Definition

CONCEPTUAL METAPHOR	Our Definition
DELIBERATORS	Readers who go slowly because they are really thinking about
	what they are reading, wanting to truly understand, take time;
	deliberators can be negative or positive.
STRUGGLERS	Readers who are reading and making it through reading tasks,
	but it's hard and they must go slowly.
DETERMINED STRUGLERS	Readers who find reading hard for them, but they are going to
	do it, by golly!
AVOIDERS	Readers who really don't want to do this (notes mainly a
	negative experience).
PLODDERS	Readers who do it but go about it slowly; keep a steady pace,
	but it's heavy, labored.
SPECIALISTS	Readers who specialize in a certain kind of reading but aren't
	as proficient or enthusiastic with other types/genres of reading.
MEANDERERS	Readers who specialize in a certain kind of reading but are not
	as proficient or enthusiastic with other types/genres.
DEVOTEES OR FANS	Readers who enthusiastically pore over and soak up every
	detail.
FOX	Readers who follow an opportunity to chase something.
TRAIL HIKER	Readers who are excited, keep going at a steady pace, but can
	slow down when the terrain changes, taking in the scenery.

PACER Readers who proceed through the task with no desire to smell

the roses or see everything; like tortoise and hare.

ARCHEOLOGIST Readers who take time to find something valuable and put all

their energy into it.

SNACKER Readers who read a little now and then have to do with

quantity.

CITY DRIVER Readers who are going the right pace for the right conditions;

they find the best route to get where they are going.

SEASONAL WORKER Readers who read, read, then rest or take a break; can be

a holiday reader.

HOBBYIST Readers who read only in their spare time (perhaps connect to

seasonal worker).

NOVICE Readers who are just beginning and they are trying to stay in

control.

HERD ANIMAL Readers who all stay together with a group, being led into

reading various things. (Faculty are border collie).

ASSEMBLY LINE WORKER Readers who try to keep up and catch on (connects to factory

mode of school).

SHOWER SINGER Readers who won't read for anybody else;. It's like they are

safe to read in their place, but when they come out they are in

danger.

TIGHTROPE WALKER Readers who straddle two things feeling tension; for example

reading for school and reading for pleasure.

OLYMPIAN/TRIATHLETE Readers who are knowledgeable and confident in their

abilities.

EFFICIENCY ENGINEER Readers who are a box checker, they get through tasks, and are

productive but have little joy in the experience.

SEEKER Readers who are intentional and search for knowledge; they

are hungry and eager.

SPRINTER Readers who go 'all in' for a short period of time; intermittent

eader.

VETERAN Readers who identify as a reader like a veteran not only has

been but still is

COLLECTOR Readers who pick up concepts and does it well.

Round Two

The purpose of Round Two was to group the conceptual metaphors into "buckets" which are like categories (Armstrong, 2007). Because the original prompt yielded rich, varied conceptual metaphors, we took the abstract target domain "As a Reader I am..." and moved each individual conceptual metaphor identified in Round One (Table 1) to a much larger categorical conceptualization of how PTs see themselves as Readers. While this may seem a simple process, there was much deliberation, a period of review and checking our analysis, and reflecting in reference to Lakoff and Johnson (1980).

We began Round Two by spending a full day in person on campus physically manipulating paper slips for each metaphor into buckets. Figure 1 shows some of our thinking from our in person meeting as we wrestled with forming the conceptual buckets. This snapshot illustrates our emerging messy process as we sought to articulate a definition that collaboratively reflected our thinking.

Figure 1
Initial Conceptual Bucket Thinking



We continued our conceptual bucket sorting through 2-hour virtual meetings once a week for approximately another three months. We illustrate this lengthy process with a sample from the DELIBERATOR conceptual metaphor (identified in Round One) to provide better understanding of our analysis described below.

PT# 49. Teaching Reading, I am a walker because I usually like to enjoy a book and take my time reading it so that I can fully understand everything that is going on in the book. I like to also go back and re-read if I feel like I didn't fully catch on, so that's why I consider myself a "walker" as a reader. [color coded green for positive tone]

Our unpacking/interpretation: This is a deliberator and strategic person, positive.

Conceptual Metaphor: DELIBERATOR

PT #2. Teaching Reading. As a Reader I am a walker because I am a slow Reader. If I want to retain anything I read, I have to do it slowly. I have always read slowly. I also don't read as often as I should. [color coded yellow for in-between tone]

Our unpacking/interpretation: The only negative is she doesn't do it as often as she does. Don't equate slow with bad. Idea of knowing yourself/self-awareness.

Conceptual Metaphor: DELIBERATOR

PT # 59. Teaching Reading. As a Reader I am a jogger because I'm not the slowest Reader but I do find myself reading things over sometimes to make sure I understand them and I like to take my time when reading. I tend to read even slower when I'm rushed. [color coded yellow for in-between tone]

Our unpacking/interpretation: Understanding takes time; quick rushing; uses strategies

Conceptual Metaphor: DELIBERATOR

As we read through like metaphors, we started seeing how deliberators, along with treasure hunters, strivers, archeologists, and others view reading as a commodity to strive for. We grouped these together into a "seeker" bucket. Then all metaphors suggesting reading as a journey or destination (e.g., meander, plodder) were combined in the "locomotion" bucket, and so forth for additional buckets.

Through this process we began to see larger and smaller buckets. We also noticed some initial metaphors such as "fox" were not supported by the data and, thus, were eliminated. Therefore, we revisited Lakoff and Johnson's (1980) three major conceptual categories (ontological, structural, orientational) to consider how our buckets aligned and what else we might "see" or "understand" about the PT's metaphors by looking through those conceptual lenses. Table 2 shows how we grouped the 27 conceptual metaphors into five buckets, how we defined each bucket, and how we aligned them with Lakoff and Johnson's three conceptual metaphors. This table represents our formative conceptualization at this point in the study.

 Table 2

 Conceptual Metaphors Grouped into Five Buckets

Bucket	Metaphors	Description	Lakoff & Johnson
A/Vocation	Devotee, efficiency engineer, specialist, assembly line worker, shower singer, seasonal worker, hobbyist, Olympian, expert	Reading is important. We have different roles. Reading is an act we relate to in different ways. Attitudes and values are embedded here.	Structural
Locomotion	Avoider, tightrope walker, trail hiker, meanderer, [city] driver, plodder	Reading is a destination or a place to be navigated. We go to or move through it. How we locomote depends on our purpose and the conditions.	Orientational and structural
Growth	Teenager, plant	Reading is organic and developmental. The environment affects growth. Growth is expected pending the right conditions.	Orientational (growth is up) and structural (eco-system)

Consume	Snacker, epicurian	Reading is a commodity and is something that nourishes us. Metaphors show a relationship between reading/student.	Structural (eco- system) and ontological (reading is commodity to nourish)
Seeker	Strategist, collector, deliberator, treasure hunter, striver, archaeologist	Reading is a commodity or destination. It is something we strive for. There is a relationship between the reader and what s/he is seeking.	Structural and ontological

Once we identified and defined our buckets we collected from the PTs in Children's Literature and Teaching Reading, we chose not to move on quickly with more data analysis for course three (Literacy Assessment). Instead, we slowed down to reread every Walker/Jogger/Runner datum for the first two courses, considering whether the bucket conceptualization remained as initially thought. We agreed with Schmitt (2005) that "Understanding require[ed] a slowing down of pace and a certain distance from the subject." (p. 384).

To illustrate our refining process, you can see our initial thoughts in the sample, then how we struggled with this PTs conceptual bucket/target domain, and how we conceptually moved her metaphor.

PT #22 Children's Literature feels like I am a jogger because I really don't read for pleasure all the time. I usually have to be told to or it will be for some type of class. However, I do enjoy reading online articles or social media all the time. Jogging, in my mind, is something that can either be super fast, or super slow. I would rather read to understand, than just read for pleasure. [color coded yellow for inbetween tone]

Our initial unpacking/interpretation: She has more than books - social media, online reading. Some limited pleasure reading (perhaps online/reading social media). Pleasure reading isn't to understand. Or is pleasure reading not worth thinking about? Is "understanding" focused more on learning? Efferent versus aesthetic reading. Typically, students say jogger as in the middle, but she is saying joggers adjust. She would probably say a runner reads for pleasure all the time. Learning is the task. She has to be told to. But she loves online/social reading. Is she an AR reader?

Our questioning/reinterpretation:

- Reading is something we carry with us, something we go to, or move through; how we go to the destination or a place to be navigated
- o Journey is a common metaphor, which is a commodity to carry through life
- How we locomote depends on our purpose and conditions

** SHE IS BETWEEN A/VOCATION AND LOCOMOTION**

- CONDITIONS
- ENJOYMENT IS MORE IMPORTANT THAN QUALITY OF WORK

Conceptual Metaphor: TAXI DRIVER MOVED FROM LOCOMOTION TO VOCATION 10-3-19

Throughout revisiting each datum, we asked ourselves the question, "What makes the conceptual metaphors hold up?" We wanted to make sure the connected theme had depth and coherence, which we referred to as "sturdiness." We discovered once we refined the target domain for some buckets, more metaphors mapped onto it. We also discovered we had some metaphorical data without a bucket or home. This work took us to the next round.

Round Three

The purpose of Round Three was to refine and group the metaphors for metaphorical coherence. As stated in the previous round, there was some reinterpretation and movement. Therefore, in Round Three we looked for significance. We studied every metaphor's element to consider its importance by asking, "What does [metaphor] mean for the Reader? How does the Reader view reading and engage in reading?" The intention for Round Three (10-12 additional weekly virtual meetings) was to examine each conceptual bucket even more critically for coherent meaning and identifying this study's core metaphors.

We illustrate this digging deep through Figure 2 which is a visual representation of how we collaboratively refined and articulated one complex conceptual metaphor. Shown below, we revisit Lakoff and Johnson's (1980) explanation of orientational metaphor, seeking to understand how the various metaphors implicated PT's relationships with reading, and refining our articulation based on source and target relationships. If the metaphor didn't hold up either direction, we revisited the data points. We carefully considered the implications of each metaphor for understanding Readers' relationships to the reading act and the conceptual metaphors we determined.

Figure 2 *Visual Representation of Orientational Metaphors*



During Round Three, two conceptual metaphors (growth, consume) developed in Round Two did not hold up to this scrutiny, so we revisited the data, seeking to understand this lack of cogency. "Growth" and "consume" metaphors are used easily and without much attention to deep meaning in everyday discourse. Revisiting the data led us to consider that common colloquialism in use meant they often carried almost literal meaning to the PTs. Reexamining the responses in those categories with fresh eyes, we considered how the statements in each group related to those in other groups and how Lakoff and Johnson's (1980) conceptual categories might shed light on what we were perceiving, and how readers and the reading act were positioned in each use. The result of this revisiting was a more fleshed out conceptualization of locomotion and a new detailed container metaphor. The result was a reconceptualization of five buckets into four buckets: locomotion, a/vocation, commodity, and container, which we consider to be the core metaphors. Table 3 and Figure 3 show our thinking as we worked to delineate characteristics of each metaphor category. In both we asked, "What is reading as represented in PT's metaphors?"

Table 3 *Revising and Clarifying the Four Buckets*

Conceptual Bucket	Definition
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Locomotion

Locomotion

- Avoider, tightrope walker, trail hiker, meanderer, [city] driver, plodder
- Reading is something we carry with us, something we go to, or move through; how we go to the destination or a place to be navigated
- Journey is a common metaphor, which is a commodity to carry through life
- How we locomote depends on our purpose and conditions
- Agentive/agency
- Situational
- May be sporadic/not continual
- Purposeful
- Strategic
- Sophistication comes from experience moving through settings/situations
- Self-aware, metacognitive

Vocation/ Avocation

Vocation

- Efficient--sometimes takes time off and has to get up to speed.
- Capable, confident--performs at high level; trained.
- Has a proficiency growth expectation--learning on the job, getting better as I go.
- Confined within a job (though may be passionate outside about parts of the job).
- There is a need to do the job, but the worker may have challenges or limitations that create struggle or affect enjoyment.
- The kind of job sets the pace--temporal expectations and performance
- May be specialized
- Outside force at work may dictate what is done and how it is done
- Productivity expectation
- Responsibility takes precedence over passion
- An expectation is to become better at my job

- There is an outside someone/force/restraint 'assigning' or 'controlling' my job
- "Have" to do the job
- Might have some struggle or challenges with the job
- You have to do it.

Avocation

- Can be very specific
- Is done as time allows--not imperative, no need for steady production
- Happens outside the confines of the job and job restraints
- The reader loves it and yearns to do it.
- Involves agency and/or autonomy.
- Does this outside of the job; does in addition to a job
- Passion
- "I get to do it."
- Hobby
- Specific genres, series, books, places
- Wants more time to do it / Wants to do it more

Seeker (renamed Commodity in Round Three)

Seeker

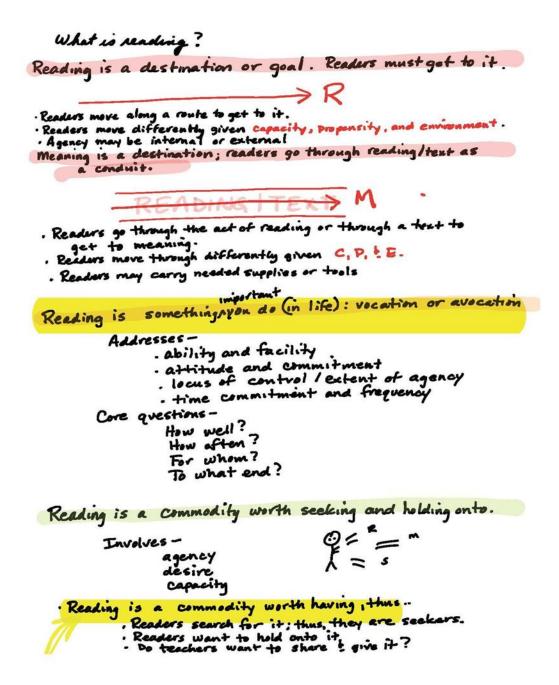
- Strategic, collector, deliberator, treasure hunter, striver, archeologist
- A reader is a seeker
- This is a commodity or destination
- It's something we strive for
- The metaphors are how the reader is in relationship, which is to seek
 it
- The metaphors are how they get to what they are seeking

Container

Container

- Reading holds or is held in something
- We interact with what is in there
- If we consume it, it is nourishment or poison or...
- If we got into it, we are seekers in it the good stuff tends to be at the bottom.
- Time is important (if student seeks but she can't get it)

Figure 3



Revisiting each bucket category and each statement within the bucket confirmed for us that each conceptual representation "held up," so we turned to considering the implications of each metaphorical stance for these readers and future teachers of reading. Again, our familiarity with context was critical in understanding significance and implications.

Findings and Discussion

Our retrospective self-study brought into sharp focus the reflexive, creative but also structured and deliberate nature of collaborative metaphor analysis as a research process. Through reflection and analysis, we became acutely aware that rigorous interpretive collaboration was the very essence of the work, leading to the following findings:

- (1) Collaboration was transactive in nature. Researchers engaged with data as text, with initial individual interpretations vigorously reexamined and reenvisioned through dialogue.
- (2) Collaboration created structure, as movement through analysis became simultaneously recursive and cyclical. Each movement provided a check and balance so when we finalized our interpretation, we determined it was trustworthy.
- (3) During collaboration, researchers experienced highly productive tensions that, as resolved, propelled the analytic process forward. A shared culture of trust was critical for productively resolving analytical tensions.
- (4) Crystallization: Collaboration and resulting movements and tensions "exerted pressure" resulting in "crystallized" findings--multifaceted and nuanced but also stable and trustworthy.
- (5) Researchers' stances as cultural insiders influenced and informed our analysis in critical ways, a finding particularly relevant in light of the culturally situated nature of conceptual metaphor.

The Role of Collaboration

Collaboration as Transaction

Like Paulus, Woodside, and Ziegler (2008), we determined that collaboration is essential to metaphor analysis methodology. We entered this work collaboratively because collaboration is a core value of the academic culture in our work setting and because we had on our research team both experienced metaphor researchers and interested neophytes. As we revisited and reconsidered our processes, we became acutely aware that rigorous interpretive collaboration was the very essence of the work. Essentially, our interpretive work was transactive (Rosenblatt, 1938, 1978). Rosenblatt's theory of transaction posits that interpretation of text depends equally upon what the text offers and what the reader brings to the text in terms of knowledge, past experiences, and purposes. Each researcher experienced the PTs metaphors as text, each bringing her understandings and experiences to make sense of that text. Lakoff and Johnson (1980) explain that our conceptual system, which is primarily metaphorical, contributes to every part of our lives. Therefore, the metaphors we individually see are producers of our lived experiences. As researchers' initial interpretations were shared and discussed with team members, we engaged in social transaction (Shaw & Mahlios, 2015), bouncing each "take" between researchers to vet, clarify and, as needed, extend the conceptualization to one that "holds up" for each of us. The process of suggesting and vigorously interrogating various interpretations resulted in findings that researchers found to be revealing and informative for their own professional lives. We found meaning in the transactions that spoke beyond the individual and, as with all metaphors, created cultural meaning. We have great difficulty conceptualizing how this work could be accomplished with the same trustworthiness if one of us had approached the work individually.

Collaboration Creates Structure

Collaboration also created structure, as movement through analysis became simultaneously recursive and cyclical. Researchers began to refer to the rhythm as a "cha cha,"

with two forward steps and a step back to review and consider each decision before proceeding again. In reexamining the sturdiness of our core metaphors, it sometimes felt as if we lost ground, or moved backward, but we moved closer to shared understanding, crystalizing our core metaphors. Each movement provided a check and balance and allowed for "scraping off" surface meanings until we could recognize "bed rock" trustworthy interpretation. Ultimately, we found the systemic nature of the process critical for maintaining the integrity of the methodology. We were careful not to let an individual's or collective's love of a particular metaphor/bucket exclude it from rigorous scrutiny and question, such as with the epicurean bucket. We were careful to return to all the data when we finalized our buckets to make sure each was sturdy/robust enough to hold each datum. We approached this work with Low's (2015) practical validation model as a guide but were open to structures and processes that emerged as we worked with the data. This productive tension between the initial guiding system and a developing responsive system of analysis continually coaxed us toward intention, attention, and critical consideration of our own processes and interpretations.

Tensions and Trust

Throughout the collaborative process, the researchers experienced highly productive tensions, illustrating the messiness, complexity, and ultimate richness of the analytic process. A shared culture of trust was critical for productively resolving analytical tensions. In every session, individuals argued for and against various interpretations, a process that might be destructive without the trusting relationship already fostered between the four colleagues. Our team composition of two novice metaphor researchers and two researchers who had previously conducted metaphor research created a clarifying questioning cycle. The novices continually challenged the experienced researchers to make the process more transparent for them, thus forcing all to be intentional and purposeful about every interpretive move. As a result, the process became clearer and more actionable.

Crystallization

Round three of data analysis focused on understanding PTs' Reader identities rather than triangulating sources. Triangulation focuses on having multiple data sources to increase confidence and credibility of the findings. Even with multiple data sources, in triangulation there is a fixed point or an object of the same domain that is rigid. In contrast we engaged in the process of crystallization (Richardson, 2003). While crystals are solid and stable, our perception of a crystal may change and alter with the viewing as they reflect and refract. What is seen depends on the angle in which it is viewed. For example, in Round Two the example of PT#22 whose metaphor was between vocation and locomotion. In the process of crystallization, we focus on the multifaceted nature of metaphorical structures. Crystallization stabilizes the conceptualization but also allows room to embrace multiple interpretations, leave the researcher and the reader with "a deepened, complex, thoroughly partial, understanding of the topic" (p. 522).

As we read, reread, and respectfully challenged each other through discussion, crystallization occurred as we looked for nuances that would have been lost in triangulating multiple data sources. This process can be conceptualized as a constant "turning over the diamond" in which metaphors, the stories they evoke, and our interpretations illuminated multiple facets of PTs conceptualizations of their own reading lives and what it means to read. As we engaged in ongoing dialogue, additional possibilities emerged as another part of a complex understanding (Richardson, 2003). Essential to the process is remaining "open to divergence and convergence; flexibility and fluidity were our guides" (Paulus et al., 2008, p.

238). Despite our most thorough and rigorous analysis, the findings are our interpretations of others' metaphors; thus, findings should be considered as an invitation for the reader of this work to continue the interpretive process.

The Role of Culture in Analysis

Where researchers "stand" within the culture they are studying influences metaphor analysis, as cultural knowledge may serve to both highlight and hide (Lakoff & Johnson, 1980) metaphorical meaning. Schmitt (2005) reminds us that to make sound interpretations of metaphorical concepts, researchers need an analogous understanding of the world; they need to have studied the data arduously, and they need to have deep understandings of the specialized knowledge under study so that conclusions can be naturally and easily drawn. We conducted this work in a well-known context: we know the field, we researched students in our own program at our own university, and we know a good bit about the developmental experiences the pre-service teachers had with reading and literacy. This familiarity supported our system of proposing and vetting metaphors; in fact, we often found ourselves checking the metaphor against examples of experiences PTs had shared with us. Did an emerging metaphor make sense given what we know of the literate lives of these learners? At the same time, familiarity is an analytical challenge as researchers' assumptions may cloud interpretations. Here again, the ongoing collaborative evaluation of emerging interpretations played a critical role, as we actively sought to hold ourselves accountable to the data. For us, contextual familiarity checked by collaboration bolstered analytical trustworthiness, with knowledge of the context helping us consider significance.

Researcher Reflections

Denzin (2010, p. 115) reminds us that "Qualitative research scholars have an obligation to change the world, to engage in ethical work that makes a difference." He also calls for a sensitivity to identity. The work we did has informed our practice, which we believe changes the world in terms of literacy. We already knew that to be an effective teacher of reading, one must be a Reader. What we did not know were the perceptions of reading that our PTs bring with them and their identities as readers. We imagined they were changed by the way we approach how to teach reading but did not have any evidence. What was first conceived as a simple way to quickly uncover these identities as walkers, joggers, and runners, became a thought-intensive exploration revealing unconsidered depth.

We documented this process both as an invitation to other researchers to consider collaborative metaphor analysis as a research method and as a possible guide to engage in the process. As a result of conducting the research and then examining our own practice, we offer these insights into methodology--the value of collaboration, the need for extended time, and the potential for generating insights into our professional practices.

Though we are in no way discounting metaphor analysis work conducted by individual scholars, we emphasize the value of collaboration in our process. As we moved from initial metaphors to the four rich overarching core metaphors, interpretations were continually subject to social checks and balances. Each possible interpretation was challenged repeatedly and examined thoroughly by multiple researchers. In the end, not only did each initial offering fit logically and meaningfully into the more complex metaphorical category, but the thematic metaphors generated new insights into our preservice teachers and the work we do with them. Those insights, then, fostered new dialogue and collaborative examination of our practice as teacher educators.

In addition to the importance of collaboration, we stress the value of extended time with the data analysis. This kind of work takes time and patience. It involves sitting with the data, carefully considering possibilities of interpretation. Metaphorically, as initial interpretations settle and the dust clears, researchers revisiting the work may see clearly small cracks in logic or instances where the piece doesn't fit the big picture. Due to the fluidity of process and exigency of cogent interpretation, the work cannot be easily accomplished on demand or with an easily applied procedure. Metaphor analysis takes time and recursive, intentional reflection.

Lakoff and Johnson (1980) note that metaphorical conceptualizations often influence our actions without our being aware of them. Examining these metaphorical constructions may lead to greater awareness of how we understand and engage with the world around us. As we worked with preservice teachers' initial responses to the metaphor prompt, we began to consider their relationships to reading in new ways. We moved beyond what we easily assumed to consider the forces more carefully at work in their literacy lives, the potential influence of their conceptualizations on how they might teach reading, and ways we might adjust our own teaching as a result of new insights. As educators, we leave this study more acutely and intentionally aware of the potential transactions between our intended communications about teaching reading and the ways PTs conceptualize and experience the reading act. As researchers, the process of stepping back to examine our own practice leaves us with enhanced appreciation of the critical interplay between sound structure and fluid interpretation.

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