From Pedagogy to Diagnosis: Metaphors Provide Access to Leadership Teams*

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Abstract

Lakoff and Johnson (l980) claimed that most thought was metaphorical and that it was "pervasive in everyday life" (p.3). Norton, Webb, Dlugosh, and Sybouts (l996) claim that "metaphors can be used to 'cut through the fog' when ordinary descriptors seem to fall short of the meaning that is required" (p.62). Ivie (2003) stated that the use of metaphor was widely applied in the field of education, and Greenlee (2007) recommended that educational leadership instructors apply the use of metaphor as an instructional tool to develop meta-cognition in the education of school leaders.

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1 Introduction

Various leadership academicians and scholars have applied metaphors in their works. For example, Bolman and Deal (l997) illustrated how adopting metaphors and applying them to a school could reframe the school as a factory, jungle, family or theater. Hoyle, Bjork, Collier and Glass (2005) compared a school district superintendent to the CEO of a business corporation, while Norton et al. (l996) compared the school district superintendent to a lightning rod, teacher, catalyst, director and builder (pp. 62-63). Cherry and

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Spiegel (2006) described an educational leader metaphorically as a touchstone leader (i.e. the change agent); an advocate (i.e. fair and equitable leader); and a parent (i.e. supportive and caring leader). With similar design, Deal and Peterson (l999) contend that school leaders must become historians, anthropological sleuths, visionaries, symbols, potters, poets, actors and healers (pp. 87-99). Senge (2006), a business academic, expanded the leader's roles regardless of the discipline, by advising leaders to become designers, teachers and stewards.

The concept of using teams is prevalent today. According to Kline (l999) and Thompson (2000), teams are especially useful to enhance creativity and problem-solving; these are characteristics that are needed globally as we advance on a fast track technologically (Pink, 2005). Couger (l995) suggested having adults compile metaphors about an experience in order to stimulate creativity, while Kemp (l999) suggested that the use of metaphors might help students evaluate an experience as it evolves. According to Kemp, the use of metaphor could support faculty in assessing learning groups.

The broad expansion of technology allows leadership students to interact as virtual teams (Lipnack & Stamps, 1997). Moreover, academics posit that individual growth will occur more readily in teams as adults interact, discuss and influence one another to adapt and change (Bolman & Deal, l997; Katzenbach & Smith, 2003; Pearce & Conger, 2003; Polzer, 2003; Senge, 2006). When the team process works, its members feel a sense of exuberance and energy that is a testament to the extraordinary power of teams (Leavitt & Lipman-Blumen, l995). But unfortunately, when adults interact in teams, not all teams are successful (Bolman & Deal, l997; Katzenbach & Smith, 2003; Kline, 1999; Kling, 2000; Lipnack & Stamps, l997; Marcellino, 2006; Pacanowsky, l995; Senge, 2006). According to Kling (2000), an individual may grapple with maintaining self-identity versus identifying with the team.

2 Problem

If team tensions exacerbate and remain unchecked, that tension can lead to team problems, such as, alienation or withdrawal of members, intense emotionalism, and task avoidance (Marcellino, 2006; Pacanowsky, 2005). To offset problems, Bolton (l999) and O'Neil and Hopkins (2002) recommended that teams have supportive coaching from the instructor. Unfortunately, the instructor does not serve as a member of the team, and adult students working in a team may view the instructor as an "outsider." They may be reluctant to discuss team problems with the instructor because when problems are "leaked" to the instructor, then the member who "leaked" the information may be perceived as a team "defector." The instructor, therefore, must build trust with team members, and convince each one of them that the instructor's role is one of team coach and facilitator. The instructor's focus must become intentional in monitoring the teams and assessing their viability (Marcellino, 2007). Moreover, even when instructors are accepted as trusted facilitators, they are not privy to all that happens on a team. Therefore, an instructor may have to devise instructional techniques that provide indirect access so that teams may be systematically monitored if team tensions or problems are surfacing (Marcellino, 2007). The instructor in this study reasoned that applying metaphors as an instructional technique in the educational leadership classroom might allow indirect access to what was happening on the teams in regard to the dynamics taking place among team members and within the team.

3 Purpose

An exploratory action-research study was conducted to assess team viability (i.e. strengths and weaknesses) in 26 teams from nine educational leadership courses. The nine courses were taught by the same instructor who also served in the role of researcher. The instructor wanted to explore the use of metaphors or metaphoric fragments (i.e. glimpses of a metaphor) in order to: (a) compare the 26 education leadership teams, and (b) examine team viability so as to further understand the team development process.

4 Theoretical and Metaphorical Framework

The primary theoretical frameworks that were applied in this study were based on the works of Johnston (l996, l998), Osterman and Kottkamp (2004) and Senge (2006). Their works are compatible and focus on reflective practice in order to gain insight regarding individual and team learning. Katzenbach and Smith's (2003) team model provided another lens that included a metaphorical assessment of a team, as a "working group, pseudo-team, potential team, real team and high performance team" (p. 84).

5 Methodology

The research design of the study was qualitative action-research (Mills, 2003). It was exploratory in that it investigated aspects of the phenomenon of group or team work. According to Mills (2003), instructors who engage in action-research try to improve their own teaching and learning. They engage in a four step process of : (a) identifying an area of focus (in this study, the area of focus was team work), (b) collecting data, (c) analyzing and interpreting the data, and (d) developing an action plan, which might be refining or changing an instructor's syllabus or instructional techniques (p. 5). Reflection is foundational to the Mills' model as teachers engage in reflecting on improving their students' learning. Furthermore, in this study, the participants were also engaged in action-research as they each updated the instructor by applying metaphors to assess their teams.

6 Participants

Participants (n=89) were current or aspiring school building leaders from public (60) and private (29) schools enrolled in a nationally accredited Master's degree program in educational leadership at a private suburban university on Long Island, New York. Of the 89 participants, 71 were female and 18 were male. Most of the students (47) were characterized as diverse or minority students, such as: African-American (29); Caribbean-American (6); Hispanic (6); Middle Eastern (2); Asian (3); European (1). There were 42 Caucasian students participating. Depending on the size of each class, teams ranged from 2 to 5 members (O'Neil & Hopkins, 2002). Of the 26 teams, there were 5 teams of 2 members each; 7 teams of 3 members; 12 teams of 4 members; 2 teams of 5 members. The number of teams and the number of students on a team were dependent on the total number of students registered in a particular class.

7 Researcher's Perspective

Because the instructor was also the action researcher in this study, the perspective of the instructor as researcher should be explained. Metaphorically, the instructor provided the primary *lens* in this study. When the instructor began working with teams, metaphoric updates were requested at the beginning and end of the team intervention (i.e. pre and post assessment). But as this study evolved, the instructor increased the number of assessments from two to five from each team member. The instructor reasoned that if all team members participated in periodic updates and similar metaphoric class exercises regarding the team experience, problematic information would be included in their depictions. The utilization of metaphor or metaphoric fragments (i.e. glimpses of a metaphor) to describe what was happening on a team might aid the instructor in not only monitoring a team's progress, but also diagnosing a team's viability. For example, when the instructor first began working with educational leadership teams, two individuals on a 6-member team applied boating metaphors to their teams, which indicated a need for instructional coaching. Two members stated:

7.1

In actuality, we were six individuals in a group *rowing in different directions* (Male).

We didn't become a team; we were like *ships passing in the night*. We were six separate individuals doing our own thing (Female).

Unfortunately, the above updates were received after the team intervention ended so instructional coaching could not be applied (Marcellino, 2005b). But this team's experience served as a wake-up call for the instructor. The instructor realized that she needed to be alerted earlier to the tensions and problems that team members were experiencing. She needed to be kept apprised of what was happening on each team from the beginning of the team intervention until its ending. Metaphoric descriptions might become the signal that would alert the instructor systematically to what was actually happening on each team.

Moreover, Morgan (l986), as cited in Beavis and Thomas (l996) stated, "a metaphor can only produce a partial view of reality, and any insight gained will perforce be one-sided" (p. 99). But the instructor reasoned that if each team member submitted team updates throughout the team experience, the instructor might be able to gain a broader perspective of the evolving team process. The use of positive metaphors by team members would indicate that the team was progressing smoothly. But if one or more students utilized a metaphor that indicated they were experiencing tensions or problems, the instructor would coach team members and offer suggestions to strengthen the team.

8 Data Collection

Methods were triangulated to insure trustworthiness, credibility, and dependability of the data (Mills, 2003). Various methods enabled the instructor and researcher to collect multiple perspectives from team members. Action-research is an iterative process as an instructor continually applies it to each course that is taught. Methods for collecting the data included field notes; observations of team member interactions; technological presentations that were peer evaluated; written team policy papers; evaluative questionnaires that had been pre-tested; periodic team member updates regarding the team experience (which included all class and team members devising metaphors about the evolving team experience); summative reflective essays about the team experience; discussion questions over the Internet; and selective follow-up interviews in-person or telephone. These methods became the data sources.

9 Data Analysis

The participants' "words" became the main unit of analysis (Bogdan & Biklen, l992) with metaphors or metaphoric fragments the key focus of questions within the updates requested. Students' words were compared, contrasted and analyzed. Data was analyzed for themes, patterns, surprises (Miles & Huberman, 1994). After the data was collected, a categorization process was established and a coding system was generated. Categories and sub-categories were created based on the number of participants who mentioned a theme or pattern as well as the uniqueness of the information. The process of categorizing the data was repeated in order to refine the analysis.

10 Key Questions

Questions and answers were primarily open-ended. Students were asked not to confer with their team members regarding their team updates, which were usually requested and submitted at the beginning of a class meeting. The final update included a reflection on the team experience as well as formal evaluations of each team member. While there were many questions asked throughout this study, two key questions were:

1. How do educational leadership students apply metaphors to describe the evolving team experience?
2. Can the use of metaphors become a diagnostic tool to assess team viability in regard to team strengths and weaknesses?

11 Team Construction and Context

While participants were diverse according to their culture, background, race, and ethnicity, they were also diverse in regard to their learning patterns (i.e. sequential, precise, technical and confluent). Sequential

learners appreciated order; precise learners valued detail; technical learners were realistic; and confluent learners displayed unique creativity (Johnston, l998, p. 25). Diverse teams were constructed utilizing a research tested inventory, the Learning Connections Inventory ©developed by Johnston and Dainton (l997a, l997b). Teams were formulated that emphasized students' use-first or lead learning patterns so as to enhance diversity, creativity and problem-solving (Let Me Learn Website: www.letmelearn.org[2]).

Each student received a copy of each class and team members' learning pattern scores. A team's mean score was compared to the mean score of the class. Teams were structured in order to provide balance so as not to give one team an unfair advantage over another team regarding having over-representation or under-representation of a particular learning pattern (Marcellino, 2005a). Previous evaluations regarding students in this educational leadership program indicated that students primarily led by sequence, followed by precision and technical processing with confluence (or unique creativity) ranking a distant fourth (Marcellino, Eichenholtz, & Sosin, 2006). The instructor's learning pattern was categorized as one who led by confluence, followed by precision, sequence and technical processing.

Team members developed team topics, which were based on actual education problems or realistic conditions in their own schools. Students in the 26 teams conferred and submitted one policy paper. Technologically, they presented one overview of their chosen team topic to class members that included the team's recommended initiatives and solutions to actual school problems. Team technological presentations were evaluated by the instructor and class members (Topping, 1998). The instructor evaluated the team papers. Rubrics were used for these evaluations.

11.1 Introduction to using metaphors.

To introduce leadership students to metaphoric application, Bolman and Deal's (l997) metaphoric reframing school perspective (i.e. a school as a factory; family; jungle; theater) and additional metaphoric exercises were applied. For example, one metaphoric exercise compared a student's "ideal" school to a student's "actual" school. Follow-up discussions were conducted in a discussion forum over the Internet. Leadership students from private and public schools commented from both an ideal and realistic perspective and stated:

11.1.1

The school where I teach is like a *mustard seed plant*. Like a plant, it must be nurtured and maintained. It has grown and produced many seeds (students) in many flowers (classrooms). (Public School Female).

My school embodies the metaphor of the *sun* because we believe that God created the sun (Private School Female).

Many times we are playing *Russian Roulette*, where we know that we do not have the infrastructure in place to educate our students, especially the low achievers (Public School Male).

My school is a *light in a sea of darkness*. [Students] not only come to school to learn, the school also serves as a temporary outlet for them to forget their problems (Public School Female).

12 Discussion, Findings and Results

Question #1 of this study asked: How do educational leadership students apply metaphors to describe the evolving team experience?

Findings indicated that there were similarities when teams were compared in the nine education leadership classes in regard to the evolving team process. The amount of tension that evolved among team members did not seem to directly affect the creativity of the team product. To reduce tensions, the instructor spent time laying a foundation of team learning that included: (a) introducing the team concepts of business and education theorists, (b) suggesting team guidelines, and (c) demonstrating the differences in students' learning patterns. It seemed that the more time the instructor spent laying the foundation for the project at the beginning of the team intervention, the less trouble team members had in developing the team project

[2] http://www.letmelearn.org/

or interacting with team members. But even though results indicated a creative team product, it did not necessarily mean that team members were satisfied with the resulting team process that had evolved among its members. The metaphors that students applied were multiple and varied, and displayed (a) societal influences; (b) diverse learning patterns; and (c) previous team experiences.

13 Research Question One: Varied Metaphors Display Influences upon Students

The metaphors developed by the leadership students not surprisingly were multiple and varied. Metaphors included (a) food samples (i.e. cake, chocolate, coffee, cooked steak, egg, lemons, peas in a pod, peanut butter and jelly); (b) fluidity and bodies of water (i.e. a canal of water, heavy fog, rising tide, ocean, waterfall, waves); (c) designs and structures (i.e. dots, four legged stool, hexagon, puzzle pieces, pillars, skyscrapers); (d) means of transportation and mechanical items (i.e. bicycle wheel, cargo ship, car, engine, horse, pendulum, rocket, roller-coaster, locomotive, train, virtual highway, and fine tuned, well-oiled or productive machines); (e) sources of power, light, heat and energy (i.e. energizer battery, hot-fired coals, charcoal, chemistry, electrical circuit, laser beams, dynamic trio, power team); (f) naturalistic items (i.e. reed, rock, rocky start, sponge, tree); (g) animals, aquatic species and insects (i.e. beaver, bee, beehive, birds, geese, horse, school of fish, runts of a litter); (h) music and musical symbols (i.e. guitar, multi-movement symphony, song); (i) material examples (i.e. glue, rope, rubber-band, tapestry); (j) sports and physical activities (i.e. basketball, mountain climbing, sailing, softball, swimming); (k) families and culture (i.e. working and dysfunctional families, melting pot; one people), and (l) races and journeys (i.e. journey by horse, over a mountain, relay race).

13.1 Metaphors display various influences from society.

Team members borrowed popular metaphors from the media (i.e. movies and television), made references to what was happening in society, or indicated influences from their distinct cultures. They wrote:

13.1.1

We are a line from Forest Gump. . .this team is like a *box of chocolates*. Each one of us is different, but we each contribute to the whole (Female).

Our team is like *a box of chocolates*. You put all the candy together, not knowing how it will taste and somehow it tastes good (Male).

Our team is like the *Jerry Seinfeld show*. My team mate is Jerry, more low key than me. I am George; I fly off the handle and stress more. But we always work it out. She calms me (Female).

I feel like we have a long road ahead of us much like *Hillary Clinton's campaign team*. We can see the end result, and we can do well, but there is a lot of work ahead of us, and a few obstacles (like time constraints) for us to overcome (Female).

The Jamaican motto is out of many are *one people*. Out of the different ideas, each of us brings, we will finally arrive at a consolidated presentation to express a unified position (Female).

13.2 Metaphors demonstrate team members' learning patterns.

There were metaphors that emerged over the span of the study that indicated that students were displaying their use-first or lead learning patterns. For example, students who led by sequence tended to enjoy the repetitiveness of the updates; they also repeated the same metaphors. A female student with a sequential lead first learning pattern repeated the metaphors of an *ocean* and a *tapestry* in various updates:

13.2.1

The *ocean* is a metaphor for this team because it is fluid, yet waves (and the undertow) pull and push one in directions that he/she may not want to go. Learning how to work with these forces to get a desired result

will take some creative designing (Update 1).

I still believe our team is like the *ocean*. The waves and currents can sweep you up, but one can navigate tough waters with know how (Update 3).

Weavers of a tapestry is the perfect metaphor for this week's update. The care and artistry that a weaver puts into his/her tapestry such as choosing the right thread before placing it upon a loom is similar to what we are doing (Update 4).

We are a finely *woven tapestry*. The threads have been woven, the fringe and final accessories have been added and the tapestry is complete. The end product can be seen as a whole beautiful piece that took many hours of dedication and effort into completing (Update 5).

Precise students were detailed in their descriptions. One female student wrote:

13.2.2

Earlier, I felt that the group was working as if the project was a *relay race*. There was this feeling that one needed to finish one piece at a particular time for the project to proceed (thanks to the sequential nature of people). But, although I have used it in a previous [update], I am drawn towards using *migrating geese* as a descriptor again. Each member contributed to moving [us] towards the goal, with not just one person leading all the time. When one person faltered, one helped bring her back to the group. Progress did not stop, and the others joined upon recovery. We expressed how we liked what the other has done, and that is like geese honking to encourage the others. In the end, it was confluence that worked to help us achieve what we did, and the geese as exceptional examples for this.

Students whose leadership pattern indicated technical processing tended to apply their words sparingly. For example, technical students briefly wrote:

13.2.3

Slow and steady wins the race. I feel this is an appropriate metaphor for our team. I feel that the ideas we started have finally matured into an extraordinary collection of ideas (Female).

We are *puzzle pieces* finding their proper place. We started as individuals but then pulled together as one (Female).

I consider us the *melting pot*. We are all from different backgrounds and cultures, and we worked well together (Male).

Confluent students were unique in their creative metaphors. For example, one male student stated in three separate updates:

13.2.4

Right now, at this point, I see us as an *electrical circuit*. There is a positive wire and a negative wire, and a ground wire. Separately, they each have their own charge, but when connected, they provide a unified power source. Right now [the members of my team] are 3 separate wires about to be twisted together (Update 1).

My metaphor is an *egg*. An egg is comprised of several parts. Individually, each part can be useful for a purpose. The shell has been used for things like candy coating, the yolk for cooking, the whites for baking and for beauty products. Put together, they produce one product that has its use and is used by many. Each one can serve a purpose on its own, but together makes one excellent product (Update 2).

Right now, I see us as one of those *Ikea end tables for a TV stand*. All the pieces are available; everything that is needed is already in place to form a piece of furniture. Now comes the tedious endeavor of placing those bolts and dowels and plastic nail hole covers where they need to go in order to have a finished, complete product (Update 4).

13.3 Metaphors reveal previous team experiences and hesitation with teams.

As the study progressed, there were students who indicated previous experiences working on teams either in a work-related school setting or a university classroom environment. A student's familiarity with working on teams seemed to give them insight (or undue tension) when confronted with working on a team. Students were wary beforehand that problems might develop. Leadership students wrote:

13.3.1

Working with my team is like taking a *ride in the country* and every so often coming across a *horse in the roadway* (Female).

I feel that we are like a *waterfall.* We start out strong, but as we hit the different levels, we slow down for a brief time and then we get strong again. I think that as we get stronger, we will work harder and better. At the end, we will pool together to create the pond at the bottom (Female).

Even though we work well together, I feel that our journey together is like a *mountain journey* with ups and downs (Female).

Question #2 of this study asked: Can the use of metaphors become a diagnostic tool to assess team viability in regard to team strengths and weaknesses?

Findings indicated that the use of metaphors could be used to diagnose a team's viability in regard to the team's strengths and weaknesses. Team strengths (i.e. a focus on purpose and goals, collective energy, supportive interactions of team members, team identity, and team learning); and weaknesses (i.e. confusion over a team's purpose and goals, lack of communication, team tensions and underlying problems, and feelings of disappointment or dissatisfaction with team members) outlined by various team theorists (Bolman & Deal, l997; Katzenbach & Smith, 2003; Kline, 1999; Kling, 2000; Pacanowsky, l995; Pearce & Conger, 2003; Polzer, 2003; Senge, 2006; Thompson, 2000) were apparent in this study. Strengths and weaknesses were illustrated metaphorically in regard to various team characteristics.

14 Research Question Two: Team Strengths and Weaknesses Are Revealed

Throughout this study, students continuously revealed both team strengths and weaknesses in their metaphoric updates. By systematically monitoring the teams, the instructor and action-researcher was able to assess the viability of the teams in accordance with the recommendations of team theorists (Bolman & Deal, l997; Katzenbach & Smith, 2003; Kline, 1999; Kling, 2000; Pacanowsky, l995; Pearce & Conger, 2003; Polzer, 2003; Senge, 2006; Thompson, 2000), and decide when instructional coaching was necessary. Various team phases evolved that included: (a) creation of a team's purpose, focus and energy; (b) indications of team interaction and human complexity; (c) fostering team commitment and identification; (d) illustrating team performance and team learning; and (e) developing teamwork and building relationships.

14.1 A team's purpose creates a team focus and creates team energy.

At the initial meeting of team members and throughout a team's development process, students stated that they needed to focus primarily on their team's purpose or goals. For example, students indicated team strengths and weaknesses in regard to maintaining a team's purpose or goals in the following statements:

14.1.1

We are a *bicycle wheel*; each one of us come together like the spokes in a wheel connected by one goal (the hub) to complete the project. We work independently, but when we come together, we move together (Male).

We were like a *train on the right track.* Together we see the goals and we are on task working toward them (Female).

At this time, I feel the team is like a school of *fish swimming together* towards a goal (Female).

But students were sometimes confused about the purpose of a team especially if they initially listed too many goals. If team members were not focused on a single purpose, energy was dissipated, time was wasted and team tensions developed (Kline, l999; Kling, 2000; Pacanowsky, l995; Senge, 2006). Leadership students stated:

14.1.2

Chaos is hitting our team (Female).

This team seems to be a *mission impossible* (Female).

I never know what's going on; it's *hit or miss* with this team (Male).

A team's energy was described directly and indirectly through metaphoric language. Sometimes, it was explicitly referred to in the initial period of team development as students began to interact with one another, but energy and movement were also referred to as a team evolved. Leadership students declared:

14.1.3

Our team as a team is mostly energized, but can always use more *life to the battery* since we are all dealing with other stresses in our other classes and/or our personal lives (Female).

We were like a *locomotive***.** We got off to a slow start, but once we finally got going, we continued moving quickly until we arrived at our stop (Female).

In some cases, if students had prior commitments or could not make team meetings, the other students moved ahead without them, and they seemed to be alienated from the communication process. Statements were made by the following students that conveyed that they were not part of an open and equitable communication process on their teams. When group members are not interacting and communicating with one another, it is difficult to maintain a collective energy (Senge, 2006). Leadership students claimed:

14.1.4

I would say we are *oil and water* because regardless of what efforts we make to work together, it is extremely difficult (Female).

The only analogy that comes to mind is a *basketball team*. There are five members on the team but two have fouled out, and the three that are left have to cover everyone (Female).

14.2 Team interaction and human complexity is displayed in teams.

Nevertheless at times, conflicting messages also appeared indicating both the complexity of human beings, and the differences among them regarding their expectations, perceptions and assessments of their team. For example, team members on a 2-member partnership team asked to meet with the instructor individually (and privately). Both assessed that they were having problems. The male student stated:

14.2.1

I think there may be some problems; can we talk?

His female partner stated, "Please, let's talk," and added:

I am alone. Maybe I am a wimp and not asserting myself [my e-mails and telephone calls sometimes are returned and sometimes not]. . . Maybe, I am exaggerating; then again, maybe not. . .

He Said	She Said
[We are] a *well-oiled machine.* I have no regrets, and no worries (Update 1)	[We are] *hot fired coals* on a grill. Waiting to heat up something.
We are getting ready to *fire up the rockets.* (Update 2)	We are *charcoal to a grill* that can light any fire and cook a great meal.
I think there may be some problems; can we talk? (Update 3)	Please, let's talk.

Table 1

The instructor met with each team member privately, and made suggestions regarding their work together. She suggested that their problems might be traced to their different expectations regarding the team's goals, as well as the differences in their learning patterns. She led by a learning pattern that was high in precision (she wanted to meet often to work out the details of their project), while he led by a technical processing pattern (he felt frequent interaction was not necessary). She was heavy on detail, while he filled in the details sparingly. After the instructor met with each individual separately, the next update (i.e. Update 4) was positive for both. Each wrote:

His Statement	Here Statement
[We] are doing well. We have almost finished the paper. We work together like *two gears in a productive machine.*	We're the *antibodies of the common cold.* This means we have what it takes to get rid of any problem. We're keeping our eyes on the *prize.* . . . I am going with the flow as long as it is a *flow and not a drought.* I also feel too that if we met more often, we could finish quicker. I think sometimes it might be helpful for my learning pattern if my partner would respond to my e-mails. There had been sometimes when I would e-mail, and he wouldn't respond. I think I took it personally like yo! But I have come to the realization that it isn't that serious, and when we get together we create *beautiful music.* He always makes up for any mistakes by working hard and letting me know he understands. . . Our [recent] meetings have been successful.

Table 2

The final reflection and assessment on the team experience (Update 5) revealed:

He Wrote	She Wrote
Our time together was smooth sailing. We arrived at our destination, and had a nice time traveling. But, we did not, however, break any records.	We made *beautiful music* together.

Table 3

Both students assessed their teams differently, but the end result was positive in regard to their interaction, respect for one another and their product outcome. It takes effort on the part of all team members to

get a team's energy moving in a unified direction so that team members identify with their teams and share leadership of their teams (Kline, l999; Pearce & Conger, 2003; Polzer, 2003; Senge, 2006). To prevent team problems, Senge (2006) recommends adopting a systems approach to teams; this approach focuses on the team tasks to be performed, but also interacting closely with people performing the tasks.

14.3 Team commitment fosters team identification.

The following metaphors described the work involved in getting all team members to move in unison toward their common goals and foster team identification (Kline, l999; Senge, 2006). Some of these metaphors described machinery or mechanistic tasks. But within many of these mechanistic metaphors, movement, energy and interaction were imbedded in the descriptions. Leadership students noted:

14.3.1

I think we are *cargo ships*. We were all working at different speeds and on different routes but we all managed to get to the same port to deliver our packages (Female).

I keep going back to the *well oiled machine* metaphor; we are a "virtual" or "digital" machine! We are a true team because we care about the project and each other (Male).

As the team process evolved, students also described their team members in humanistic terms. They explained the intricacies of their teams as reliance widened from an individual outlook to supportive interactions of members working in a unified commitment towards the team (Bolman & Deal, l997; Katzenbach & Smith, 2003; Kline, l999; Polzer, 2003; Senge, 2006). Within these humanistic descriptions, students indicated things were currently "going well," and a team identity was starting to evolve. Leadership students stated:

14.3.2

We are *people climbing a mountain*; each person needing to be willing to take risks and push higher for the team (Female).

We are like a *softball team on a winning streak*. The runs just keep on coming. We're near the end of the season with the playoffs this weekend and the championship next week (Female).

We are more confident like *experienced sailors* learning it is possible and very likely that we can and will get to our team destination (Female).

Students also described their team members in naturalistic terms as they worked collaboratively toward an interactive and a unified team identity. Students commented:

14.3.3

I would compare us to a *beehive*. We each accomplished [a] task and then meet at the "hive" to share our results and work collaboratively (Female).

Our team is like a *reed*. We appear fragile and insubstantial, but we are resilient and can weather the storm (Female).

If a *goose* falls out of formation, it suddenly feels the resistance of trying to go it alone, and quickly gets back into formation to take advantage of the bird with the power who is right in front (Female).

We are like a *school of fish* swimming toward the goal, but now finding food (Female).

The *fog* is lifting and we are beginning to see the way, hooray! (Female).

14.4 Team performance and team learning.

While team formations are valued for their creativity and problem-solving potential (Bolman & Deal, l998; Kline, l999; Leavitt & Lipman-Blumen, l995; Polzer, 2003; Senge, 2006; Thompson, 2000), not all team ventures are positive experiences. Not all teams succeed according to team members' expectations. Theorists

have recommended that team members become accountable to the team product to solidify team identity (Katzenbach & Smith, 2003). Unfortunately, students have time constraints imposed upon them personally and professionally, which affect the team performance and learning as a unified team. Some teams experienced problems that centered on the lack of communication and interaction with some team members. There were team members that did not seem committed to the team because they were experiencing personal or professional problems. A student wrote:

14.4.1

We are the *runts*. . .meaning a mish mach of differences. We seem like the *leftovers*. We are all over the place doing other things. We don't have much *left* to give to the team (Female).

Teams that were "successful" performance-wise tended to communicate with one another often, and followed the advice of team theorists and the instructor's guidelines. The interaction of team members as part of a positive interconnected unified system was described. Leadership students commented on their unity and wholeness:

14.4.2

When you eat *peanut butter and jelly* separately, you have 2 enjoyable snacks. But when you put the 2 together, you get a better and even more enjoyable snack (Female).

Our team is like a *rope* with each strand entwined and adding strength to that of the others. We seem to be getting more entwined and stronger (Female).

Unfortunately, on some teams, students learned about the fragility of relationship-building and the unpredictability of the team process. Students learned that relationship-building is hard work and everyone does not always contribute as expected. When the team did not meet a team member's expectations, disappointment and dissatisfaction seemed to be a secondary by-product of the team experience. Team members learned about the team process, which added to their knowledge base, but they did not always experience learning as a unified team. The team process did not always meet expectations for team learning or unified learning outcomes. Sometimes, this happened even when the team performance (i.e. team presentation/paper) was well received and highly evaluated.

For example, a student on a highly rated team expressed his disappointment:

14.4.3

Our team had a solid base with which to start the project, like a *strong horse in a carousel ride*. . .The carousel ride began. Illuminated by colored lights; they smiled. . . Stretch! Stretch! The brass ring approaches! Got it! Got it! One remains, faintly touched as the ride and the music slow. . . We handled the ups and downs of the project, remembering never to stop laughing and keeping it fun. However, as our work neared completion, some perspectives shifted, and it can be said not all members truly did a good job. I feel safe saying we were a high functioning group, with certain members displaying true leadership qualities and others not so (Male).

14.5 Teamwork and building team relationships.

When the instructor began working with the educational leadership teams, updates on a team's progress were requested twice during the experience (comparable to a pre and post assessment). By asking for updates throughout the team process, the instructor and action-researcher was able to monitor the teams, and gain a multiple (and comprehensive) perspective regarding the evolution of each team. The instructor asked for team updates starting two weeks after the teams were formed, and then continuing weekly or biweekly depending on the semester's length (i.e. 8-weeks or 15-weeks) for a total of 5 updates. The number of weeks in a semester did not seem to affect a team's performance, commitment, team identification, teamwork or propensity to build team relationships.

There were successes (and tensions) whether the teams were formulated in an 8-week or 15-week semester. A comparison of metaphoric thinking among teams and classes widened the instructor's understanding of the team process. Whether the team experience was categorized as "positive" or "tense," students learned from the team experience. They learned what to do and what not to do on a team, which added to their knowledge about teams and building relationships on teams. They also learned about fostering professional and respectful interactions with others. Two leadership students on the same team stated:

14.5.1

We worked like the *ocean.* We came on strong, and went out calmly. We were able to roll with the waves (Female).

Our team started out as a person trying to *climb a mountain* with their teammate by their side, hitting rough spots along the way, but eventually making it to the top after learning tricks and new ways to complete our team goals (Female).

When problems were revealed in metaphoric updates, the instructor asked team members to reflect on: (a) "what happened?;" (b) "what have you done (or not done) that may have contributed to this team's tensions or problems?;" and (c) "what can you do as a team member to fix the problem?" Based on their reflections, students devised solutions to their team problems. They realized that teamwork and relationship-building is hard work. Moreover, they took responsibility and ownership in solving their team problems. The application and utilization of metaphors, subsequently, enabled the instructor and action-researcher to revise an action-plan (or syllabus) that expanded the use of metaphors from an instructional technique (Greenlee, 2007) to a diagnostic tool. The instructor was able to assess a team's viability in regard to its strengths and weaknesses, and initiate coaching when necessary (Bolton, l999; O'Neil & Hopkins, 2002). The instructor and the students learned from the team experience that evolved, which added to their knowledge base concerning teams.

The following is an example of positive interactions on a team from a female team member in regard to four of her five updates.

14.5.2

Our team is like a *song with a written chorus and a bridge*, but the verse is still a work in progress (Update 1).

We are like a *guitar that has been properly strung* but is still being finely tuned (Note: I figured I would continue with the music metaphor) (Update 2).

A *symphony* is not constructed overnight. It takes a great deal of time, commitment and love to get the symphony just right (Update 4).

We were a *multi-movement symphony* and the music was beautiful (Update 5).

15 Conclusions and Recommendations

In this study, students in nine educational leadership courses at a private university were presented an opportunity to interact as a member of a diverse learning team. Teams (n=26) were compared and analyzed by the instructor and action-researcher. By receiving updates from 89 team members, the instructor was able to devise multiple perspectives of what was happening on the teams. Moreover, the instructor was able to refine and widen the utilization of metaphors from a pedagogical or instructional technique to a diagnostic tool, which could alert the instructor to team tensions or emerging team problems.

When multiple perspectives were presented by students as the team process evolved, the diagnostic process became fine-tuned. It no longer appeared one-sided (Beavis & Thomas, l996) but instead provided a multiple and broader perspective. The instructor expanded her instructional techniques by monitoring the teams, and guiding students toward solving their team problems, and taking ownership of their teams (and the problems that were evolving on them). The instructor and students applied the action-research process of rethinking, reflecting, discussing, re-planning, understanding and learning (Mills, 2003; p. 16).

While the application and analysis of metaphors widened instructional understanding, the instructor deduced that students also learned within their teams whether the experience was categorized as positive or tense. Students learned about the unpredictability and disappointment of building team relationships. They also learned about the diversity of team members (in regard to distinct cultures and diverse learning patterns) as well as the satisfaction derived from building a professional team product. Metaphoric updates, which were continuous throughout the evolving team process, allowed the instructor to:

1. Gain non-intrusive access to teams; the *metaphor* itself became the common reference for entrance.
2. Monitor teams for indicators of team strengths.
3. Identify problematic situations in teams early on.
4. Assess teams based on a broader perspective from all team members.
5. Apply coaching techniques when the team situation warranted it.

There were no differences noted in regard to team strengths or weaknesses when the variables of race, ethnicity or gender were examined. Nor were differences noted when administrators or teachers (i.e. aspiring administrators) from private or public schools working in teams were compared. Team tensions and positive team interactions were displayed throughout a team intervention regardless of team members' diverse physical or job-related characteristics. This study showed that students were influenced by their previous team experiences, which seemed to affect their initial propensity or hesitancy toward working on a team in this study. Teams ranged in size from two members to five members, and in this regard both team strengths and team weaknesses were displayed regardless of the size of a team. As indicated in regard to the "He Said/She Said" example in this study, differences in team members' learning patterns, and their assumptions and expectations regarding a team's development did seem to contribute to various team tensions. As Mills (2003) states, human beings "are very complicated organisms, and compared with chemicals. . .their behavior can be disorderly and fairly unpredictable" (p.3).

Lakoff and Johnson (l980) claimed that most thought was metaphorical, and in this study, students in diverse learning teams illustrated that they were influenced by various societal influences in their metaphoric descriptions, such as their distinct cultures and the media. Perhaps, a follow-up study could explore these influences and experiences, and how they affect students' assumptions, expectations and preconceptions about teams. Students were also influenced by their previous team experiences; another follow-up study might explore how previous team experiences, or the lack of them, may affect professional relationship-building and task development on teams.

16 Research Significance

This study may broaden team understanding and influence the development of additional action-research team studies. In so doing, educational leadership instructors may be able to improve their team instructional models. The use of metaphor may be applied as an instructional technique as well as a tool for diagnosis of team tensions or problems, which may allow leadership instructors to gain access to teams and apply supportive coaching when appropriate so that team learning and professional relationship-building may be improved.

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