

Leadership Metaphors: Developing Innovative Teaching Strategies

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Research conducted over the last half century has revealed that optimal learning takes place in the brain when both the left-brain and the right brain work in balance. Educators can intentionally arouse the activation of one hemisphere of the brain over the other through the use of right brain strategies in language learning. These strategies, including analogy, metaphor, synthesis, and imagery connect the two separate thought processes of the brain, linking the sequential analytical knowledge of the left brain with the conceptual patterns and images of the right brain. In 1997 Clouse and colleagues developed a teaching strategy called “Whole-Part- Whole,” where the learning is tied directly with the framework of the learner. Through “just in time teaching,” the student learns the parts of a opened-ended case. The recursive design allows students to recreate a new “whole,” which becomes new applied knowledge. The whole-brain theory and the Whole-Part-Whole strategy of learning were used as the basis for an assignment at Vanderbilt University in which graduate students were asked to write a paper using metaphors to describe leadership skills of a leader that they knew. Students were required to tie the metaphor to leadership theory. Students were very creative in the development of metaphors to describe leaders that they enjoyed and admired.

INTRODUCTION

The simplest way for one person to communicate a message or idea to another person is to use sentences containing words having their literal senses or meanings. But one may also use words figuratively, for example using analogies and metaphors to convey thoughts or ideas. By combining ordinary vocabulary in unusual ways, a figure of speech can sometimes communicate meaning more

effectively, and consequently can enrich literary and conversational experiences. Metaphors especially make something new out of ordinary words or phrases – something that cannot be said without recourse to the metaphor itself.¹

As defined by Aristotle, the term “metaphor” meant the transfer of a term, naming one thing in terms of another on the basis of a perceived similarity. Traditionally, the Aristotelian metaphor was considered to be a figure of speech in which parallels were drawn between two unlike entities as in the phrase by Aristotle, “the lion leapt” with the lion referring to Achilles (see *Poetics* 1457b; *Rhetoric* 1406b, 1410b, 1412a). In this metaphor a literal reference (Achilles) is replaced by a metaphorical reference (the lion). What makes the metaphorical identification of Achilles with a lion possible is that Achilles and lions have something in common, namely, their strength and bravery. Metaphor, in the Aristotelian concept, was used for artistic and rhetorical purposes only, a conscious and deliberate use of words to embellish or decorate language. It was not something that was essential to language or to human thought and reasoning (Kövecses, 2002; Ortony, 1993). Aristotle believed that to use metaphor well required special talent. In his words: “The greatest thing by far is to have command of metaphor. This alone cannot be imparted by another; it is the mark of genius.”

This classical Aristotelian definition of metaphor as a figure of speech was the universally accepted perception of metaphor in both scholarly circles as well as popular minds until the early 19th century (Gozzi, 1999). Around the turn of the century a group of English poets (including Shelley, Keats, and Coleridge) began to publish their views on metaphor. Maintaining that metaphor was basic to communication, their theory was in direct contradiction to Aristotle’s analysis that metaphor was merely an appendage to language. These poets were credited with precipitating the eventual split that occurred between the classical view held by Aristotle and the emerging romantic view that envisioned language to be an integral part of man’s conceptualizing and communicating (Hawkes, 1972).

It was not until 1936 with the work of I. E. Richards and an extension of his work by Max Black in 1962, however, that linguists, psycholinguists and cognitive psychologists developed an interest in metaphor (Gozzi, 1999). Using Richards’ terminology of a *topic* and a *vehicle* which are linked by a common *ground*, these interactionists, as they were later called, found at the root of every metaphor some kind of juxtaposition. By way of example, in Shakespeare’s “Juliet is the sun,” Juliet is the *topic*, sun is the *vehicle*, and the *ground* is composed of such properties as warmth, centrality, sustenance, brilliance, and so on.

In the late 1950s, the inception of a new field of study called “cognitive science” approached learning from a multidisciplinary perspective. New experimental tools allowed scientists – anthropologists, linguists, philosophers, psychologists, neuroscientists – to begin serious study on the functioning of the mind and to test their theories rather than simply speculate about thinking and learning (Bransford, Brown, & Cocking, 2000). Although philosophers, including Locke and Kant, frequently wrote about the cognitive attributes of metaphors, it was the seminal study by George Lakoff and Mark Johnson in 1980 that changed the way many people perceived of the metaphor. Entitled *Metaphors We Live By*, Lakoff and Johnson’s study showed convincingly that metaphor is a pervasive aspect of both thought and ordinary language and is consequently the primary vehicle for language change (Kövecses, 2002). Their notion of metaphor has become known as the “cognitive linguistic view” of metaphor.

Lakoff and Johnson’s study challenged almost every characteristic of the commonly accepted use of metaphor as conceived by Aristotle. They argued that metaphor is a property of concepts and not just words and therefore is often not based on similarity. Its purpose is not for artistic and aesthetic purpose but rather an inevitable process in “the creation of our social, cultural, and psychological reality” (Kövecsis, 2002, p. xi). Lakoff and Johnson concluded that metaphor is used effortlessly in everyday life by ordinary people, not just by the gifted, as Aristotle asserted. In their words:

Metaphor is pervasive in everyday life, not just in language but also in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature...The way we think, what we experience, and what we do every day is very much a matter of metaphor. (p. 3)

Since 1980, thousands of treatises by hundreds of philosophers, linguists, literary critics, rhetoricians, and psychologists have attempted to construct singular theories on metaphorical thinking. While all approach the subject from not only different disciplines but different perspectives within those disciplines as well, most (but not all) base their work on the cognitive approach. The great numbers of multidimensional strands used to describe metaphors attest to the fact that metaphor is not something that can be easily confined and that it is an indispensable basis of language and thought today (Goatly, 1997). While not many decades ago the legitimacy of metaphors was vigorously debated, today metaphors are widely accepted as proper cognitive devices and valuable teaching tools (MacCormac, 1985). For a systematic introduction to, or critique of, theories of metaphor, the reader is directed to studies by Gibbs (1994), Gibbs and Steen (1999), Haskell (1987), Johnson (1981), and Ortony (1993).

In looking specifically at the ways in which metaphors can be used as teaching tools in classrooms, much of the research has centered on what has been discovered in the last twenty years about split-brain functions.

TEACHING WITH METAPHORS

Research on teaching and learning indicates that learning takes place in two separate areas of the brain. In other words, each side of the brain has its own mode of thinking and learning. One part, called the right brain (because the functions appear to reside in the brain's right hemisphere), controls visual thinking, holistic concepts, and pattern recognition. The other hemisphere, the left-brain, controls verbal and linear thinking. Researchers have been able to assign individual mental functions to each side of the brain through extensive research. These functions are summarized in the following table.

TABLE 1
LEFT BRAIN AND RIGHT BRAIN FUNCTIONS

<u>Left Brain</u>	<u>Right Brain</u>
Logical/orderly process	Random processes
Sequential	Intuitive/simultaneous
Rational	Holistic
Analytical	Synthesis
Objective	Subjective
Looks at parts	Looks at wholes
Practical	Emotional
Serious	Playful
Structured/Systematic	Flexible
Judgmental	Nonjudgmental
Recognizes names	Recognizes faces
Responds to verbal instruction	Responds to visual and kinesthetic cues
Uses language for memory	Uses images for memory
Dependent upon words for meaning	Interprets body language

Source: Adapted from Sanders and Sanders (1984), p. 18.

Left-brain dominated people focus on logical thinking, analysis, and accuracy. They often choose professions such as engineering, accounting, and the law. Right-brained people, on the other hand, focus on aesthetics, feeling, and creativity and are consequently drawn to the arts pursuing careers as writers,

musicians, and artists. There are some people, however, who are whole-brained and equally adept at both modes.

A pioneer in the study of brain functions was Dr. Roger Sperry, who won the 1981 Nobel Prize in Medicine for his work on the duality of the brain. Sperry's research began in 1958 and provided momentum for the proliferation of left brain/right brain studies now emerging in psychology, neurology, and education. The resultant findings questioned assumptions previously held on how we learn. The most relevant question for teachers, of course, is what does it mean in terms of the way we teach children? For discussions on hemisphere lateralization and their implication on teaching see especially Bottini et al. (1994), Bransford, Brown, & Cocking (2000), Caine & Caine (1994) (2001), Danesi (1989), Gopnik, Meltsoff & Kuhl (1999), Ornstein (1997), and Rose and Myer (2002).

Left-brain vs. right-brain research has distinct relevance for today's educators. Although teaching and learning research is filled with a rich vocabulary, addressing critical and creative thinking, analytical and holistic thinking, convergent and divergent thinking, etc., research indicates that in general, the educational system has traditionally focused on the development of left-brain modes of thinking over right-brain ones (Pugh, Hicks, Davis, & Venstra, 1992). This is understandable when research suggests that 90% of all people are left-brained and that most individuals indicate a preference for one style over another (McCarthy, 1981). For optimal learning to take place, however, research indicates that both hemispheres need to be employed equally (Sanders & Sanders, 1984).

According to Haskell (2001), "research literature on metaphorical, analogical reasoning, and the study of figurative language focus on structures and cognitive processes involved in encoding and retrieval of information that operate during learning, not on the implications for instruction" (p. 79). One instructional tool that is recognized in almost all domains of study as an effective learning device, however, is the metaphor.

The metaphor speaks to both sides of the brain and can therefore be used to develop and balance the thinking process. Sanders and Sanders (1984) explain that metaphors, along with analogies, synthesis, and imagery are specific strategies in written language that can be used to intentionally stimulate function of the right hemisphere of the brain. With the metaphor, the sequential, analytical, verbal knowledge of the left brain becomes "real" to the right brain, which relies on holistic conceptual patterns and images to understand what the "big picture" means. Sanders and Sanders go on to state that metaphor acts as a bridge to connect these two separate thought processes of the brain, connecting the literal with the figurative, the factual with the imaginative, and the rational with the intuitive.

The metaphor, therefore, can be used as a model to offer students a familiar image that demonstrates how a given concept actually works. Derived from familiar examples of everyday living, the metaphor aids the learner in internalizing new knowledge and information, assisting in the recall of facts and ideas in the process. Sanders and Sanders (1984) assert that the metaphor "is perhaps, the fastest and most effective route we have to link the right brain with left" (19). Metaphor allows imagery (right brain) to be verbalized and creates imagery for specific facts (left brain). Thus metaphor conjures a sensual image of the new concept by bridging the new knowledge to past ideas, images, and experiences already safely stored in the brain (Pugh et al., 1992).

Metaphors help to identify similarities between conceptual categories that may not be obvious at first glance – seeking to find what Aristotle called "similarities in dissimilarities." Lakoff and Johnson (1980) called this mapping, using a mental map to make complex ideas easier to understand by synthesizing disparate ideas in the right brain that sequential thinking in the linear functions of the left brain often exclude. Lakoff and Johnson refer to metaphor as mapping structure from a source domain onto a target domain.

In order to create a metaphor, one must understand the core of the issue before it can be contrasted with something else. In fact, Bransford, Brown, and Cocking (2000) state that "all learning involves transfer from previous experiences. Even initial learning involves transfer that is based on previous experiences and prior knowledge" (p. 236). The right brain perceives relationships – it specializes in holistic, conceptual understanding. In other words, if we are to teach concepts as opposed to merely

encouraging students to memorize definitions, a real-life model that shows how the concept can be applied is necessary.

The very fact that metaphor illustrates through comparison is what makes it such a powerful teaching tool. As students move from the concrete toward the abstract, they can use the metaphor tool to understand complex issues and to express abstract thoughts, conversation, and writing. The construction of analogy and metaphor, according to Piirto (2002), is an important part of information processing. A study by Lakoff and Turner (1989) found that the way humans conceptualize language is essential to an understanding of how humans process images. In fact, metaphors are vital in order for students to comprehend and digest sophisticated literature and poetry (Lakoff and Turner, 1989). Sanders and Sanders explain it this way:

Thinking in metaphors links concept and imagination; it expresses thoughts otherwise unexpressed; thinking in metaphors is a teachable skill – a skill than can motivate students to learn multiplication tables or value the principles of social interdependence. Metaphor thought provides an understanding of concepts not possible in the more passive activities of reading or writing. Indeed, metaphors are tools for insight, for creativity, for concept development, for learning, for true understanding. It is with the metaphor that we can unlock the part of our minds that schools have traditionally left closed and untapped, the part of our minds where conceptual imagery resides, the right hemisphere. (1984, p. 4)

Another interesting thing about teaching students to use metaphors is that metaphors require students to not only use all of the levels of Bloom's (1984) taxonomy for cognition, they also pull the affective domain into the learning process.² The affective domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. By having students pull their feelings and previous experiences into the learning process, their learning is enhanced. The way we interpret any situation or fact is influenced by how it affects us emotionally (Caine and Caine, 2001). Referring again to Lakoff and Johnson's study (1980), metaphors are only understood in the context in which they are experienced. Their meaning comes from a complex set of responses and connections that are set up, some of which are emotional.

Pugh et al. (1992) contend that "metaphorical thinking cuts across subject and discipline boundaries by making knowledge in one domain a guide for comprehending knowledge in another, with some transfer of meaning taking place in both directions" (pp. 4-5). It is this transfer, this bridging, that makes metaphor a tool that can be used to express abstract thoughts (Haskell, 2001). "To be a metaphorical thinker," according to Pugh et al., "is to be a constructive learner, one who actively builds bridges from the known to the new" (p. 5).

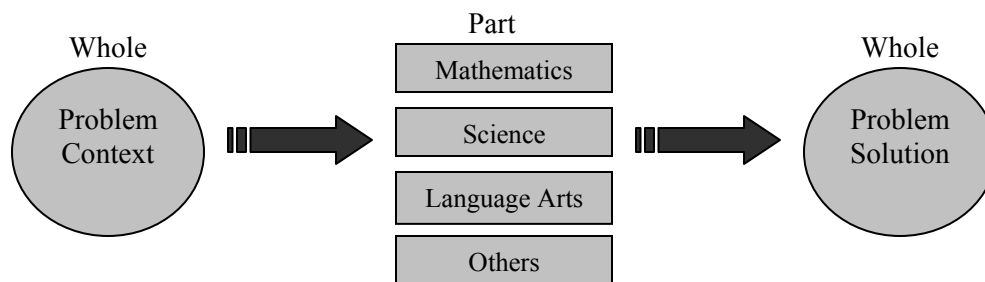
Similar to the work of Bransford, Clouse and colleagues have further developed the process and named it the Whole-Part-Whole learning process. The learner builds the new concept to be learned around some ideas or concepts that he/she already knows and then learns the pieces or parts of the new learning, thus developing a new concept attached to the previous knowledge base. The following figure provides a schema to show the Whole-Part-Whole process. A major portion of Clouse's research work is designed to investigate ways in which entrepreneurship can be taught in various learning environments. His work is based on the following assumptions and learning theories.

Clouse's work has been based on a set of assumptions about how people learn and how schools prepare students to live in the real world, the first of which is that much of traditional schooling in America is built around systems of compliance and control. This control approach tends to stifle students' creative and entrepreneurial instincts. The work of Clouse, Goodin and colleagues involves capturing the interest of the student through the use of problem- and project-based instruction delivered via the Internet. Much of their work has centered on a program called *Entrepreneurs in Action!*TM This program seeks to involve students in an entrepreneurial problem at the outset and to promote learning of traditional subject areas as a part of the problem solving activities that are undertaken. This strategy is designed to teach students to think entrepreneurially by the use of local cases and/or scenarios. Unlike many curriculum

strategies that teach conformity, structured learning and unrelated learning, these strategies support creative and entrepreneurial thinking across the curriculum (Clouse & Goodin, 2001).

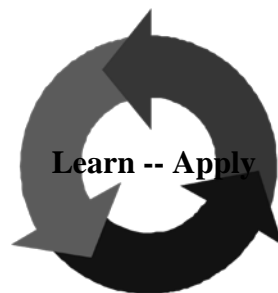
The *Entrepreneurs in Action!*TM program emphasizes the whole-part-whole instructional strategy that has been developed out of this research. We provide a situation where students see the entire picture of the opportunity, break the opportunity into parts and then move back to a new whole as developed from his or her own research regarding the opportunity. This approach involves seeing the big picture first, breaking it into parts (instructional units) and then putting it back together again into a new whole (See Figure 1).

FIGURE 1
WHOLE-PART-WHOLE LEARNING



This instructional design supports the Clouse theory where the concept being taught is connected (hooked) to the framework of the learner. Students learn and then apply new knowledge in situations that will reinforce their learning. Termed "recursive design," this strategy supports long-term learning of important concepts versus short-term memorization learning (See Figure 2).

FIGURE 2
RECURSIVE LEARNING MODEL



In addition to using our whole-part-whole concept and a recursive design, just-in-time learning techniques are also used by presenting curricular content just at the moment when the need for it arises; this feature addresses the issue of maintaining the relevance of the content being learned (Clouse, 2004). With these theories and assumptions in mind, students in a graduate course were given an assignment to

demonstrate their knowledge of leadership theory and behavior by using metaphors to describe a leader with whom they were familiar.

Metaphors Profiling Leadership Skills

The students were asked to form their own metaphorical expressions relating to a person they have been associated with who has exhibited some form of leadership skill. The concept of metaphor in this assignment is used in its popular context asserting that A is B or that A is like B, for example: “The principal was a lighthouse.” In regards to expressive metaphors like these, a useful distinction between the source and target domain have been put forward by Lakoff and Johnson (1980). A metaphor implies that the target domain (the principal) is like the source domain (a lighthouse). While dissimilar in physical respects, they can both exhibit commonalities such as reassurance, comfort, light to guide the way, etc. This similarity between the domains is a central aspect of the process of using figures of speech. Metaphors relate one area of experience to another and in so doing can create new meaning and better understanding. Expressive metaphors describe by throwing new light on the target domain. They evoke by asking the recipient to draw on their own experience in the base domain and extend it to the new.

The students were asked to create the metaphors of their own accord. They were encouraged to follow their first instincts in forming lexical associations depicting the essential characteristics of a leader. The number of lexical items in each metaphor was unlimited. For the target domain, many chose past coaches, teachers, employers, or relatives who had influenced their lives. In addition, the students were asked to describe the organizational setting in which this person operated, the leader’s role within the organization, and the lessons learned from the person they chose. For purposes of this study, the metaphors are grouped into different clusters based on their semantic properties. The content analysis of the metaphors of leadership provided the following seven categories:

- 1) *People*: Archeologist/bulldozer operator, artist, Attila the Hun, big brother, boat captain, campaign manager/strategist, coach, father, gardener, general, gentle giant, the good shepherd, heptathlete, horticulturalist, king and his castle, King Arthur, man-child, master craftswoman, musical conductor, musician, opportunist, physician, pioneer, runner, sculptor, shopper, surgeon, task master, teacher
- 2) *Nature*: Magnolia tree, Mother Nature, mountains, river, tornado, tree, wind
- 3) *Animals*: Catskill eagle, hawk, head lion, head lioness, mother hen, spider, stork
- 4) *Transportation*: bi-plane, sailboat, spaceship, Swedish Sloop tugboat
- 5) *Creativity and Energy*: Delicate dance, energizer bunny, motion picture, multi-plug power strip, television commercial
- 6) *Objects*: child’s growing mouth, china cup with a crack, hard-boiled egg, inflatable clown, iron fist in a velvet glove, rolling pin, rope, steel fist in a kid glove, white lightning (alcohol)
- 7) *Guidance*: Automobile headlights, bridge, compass, lighthouse, pendulum/clock, pipeline

Following are three examples – horticulturist, a rope, and a Catskill Eagle – illustrating how students were able to use metaphors to profile leadership skills.

The Horticulturist

First appearances revealed an expansive, well-maintained garden. Each section of the garden seemed to be fed, but only enough to sustain life as the majority of the garden’s resources were used to maintain

the large oak tree in the center of the garden. Although the oak tree nourished and protected the rest of the garden, the discerning eye of the horticulturist could see that the venerable tree was diseased.

In this paper, the horticulturist was used as a metaphor for a school superintendent who faced many challenges following a retiring superintendent of eleven years. The diseased oak tree represented administrative abuse of power, lack of respect for educators, lack of involvement by the community and parents, and the misuse of resources. The new superintendent (the horticulturist) had to plant seeds to grow programs, cull the abusive power prevalent at the top, develop and empower educators to take greater action, invite parent and community involvement to nurture new potential, and finally alter the flow of resources to better encourage growth.

After pruning the great oak, the horticulturist found that more resources were available for other sections of the garden. Where shade provided protection for young seedlings, he found that lasting sunshine was required for continual growth. The previously administered small amounts of water may have reduced the chance of flooding, but now healthy plants were capable of absorbing more water and the oak required less. Thus, the garden grew strong and beautiful and was able to rejuvenate itself each year.

The author of this paper realized that the superintendent helped to shape his leadership character by demonstrating his ability to ascribe to an integrity of principle, by strengthening his ability to avoid system abuse, and by recognizing and utilizing the power of people within the system to create improvement and excitement for change.

A Rope

Another paper used the analogy of a rope to describe the dean of students at a small boarding school. Like a rope, the dean was woven of many individual strands – he was multidimensional. It was this interweaving of all his parts that made him stronger. When pulled on by the pressures of students, staff, friends, and family, he (the rope) was pulled taut in opposite directions but did not snap. Instead, he became stronger with added tension – like a rope showing its greatest strength when it is stretched and pulled.

Another rope-like characteristic seen in the dean was his ability to tie things, people, and ideas together. Serving as dean of students involves a great deal of people management in terms of both students and staff. This dean was able to find common threads and pull out ideas that were designed to help all participants see things from a new perspective. He had the ability to draw a group together, wrap them around a common goal and interweave their differences. In the process, he used their assets and ideas to add to the uniqueness of the group. He braided them into a unified idea to which people were able to hold.

Like a rope, the dean was flexible. A rope is not a single solid shape but can be molded and adapted to serve varying purposes at any given time. This, rather than detracting from his strength, added a new dimension to the dean's character. Like a rope that becomes a knot, loop, or lasso to serve a specific function, the dean bent to the process that worked best in any given situation.

A trained, guiding hand can take a rope and tie it into complicated knots, or form a lasso, or use it to scale a mountainside; but only the person who knows how to prepare the rope can successfully use it for its designed purpose. Like the rope, the dean depended on an outside force to move and guide him – the leadings of the Lord in his daily life.

If a rope is to be moved, it must be pulled, not pushed along. Similarly, the dean gently introduced new ideas to his organization and then allowed others to grab hold. The author of this paper stated that the dean “has woven himself into the framework of my life and is someone I will not forget.”

Catskill Eagle

Using *Moby Dick* for inspiration, one student compared his pastor to the Catskill Eagle described by Melville:

There is a wisdom that is woe; but there is a woe that is madness. And there is a Catskill Eagle in some souls that can alike dive down into the blackest gorges, and soar out of them again and become invisible in the sunny spaces. And even if he forever flies within the gorge, that gorge is in the mountains; so that even in his lowest swoop the mountain eagle is still higher than the other birds upon the plain, even though they soar.

The author of this paper described the pastor of his church as diving into the gorge of his parish's poor and homeless to lift them from their suffering. He flew low enough to see the challenges firsthand yet high enough to soar over common objections. His vision was tremendous. Like the Catskill Eagle who knows no boundaries, the pastor ignored previous lines of demarcation between Christian denominations and enlisted the help of the entire religious community.

No matter what it is doing, whether it is soaring or diving, or perhaps even perched, the Catskill Eagle is a majestic creature that can awe the spectator at any time. Like the Eagle, the pastor's leadership was always visible and it manifested itself in countless ways. He treated all people as equals, he listened with compassion and concern for his fellow man, and he opened the church to transients.

This student related how a terrible tragedy in the pastor's life (his mother was murdered) led to the Catskill Eagle soaring higher than the author had ever seen anyone fly. He referred again to *Moby Dick* where Melville warns of the danger of flying in the gorge and feeling the sorrows of life: "Give not thyself up, then, to fire, lest it invert thee, deaden thee; as for a time it did me." Gradually, as the years passed by, the Catskill Eagle managed to pull himself up from the fire that consumed him. Finding forgiveness in his heart and reiterating his belief in the inherent value of all human life, he emerged from the ashes like the mythological phoenix, continuing his crusade to help the poor.

The lessons the student learned were many. The pastor taught this student that a leader has strength, courage and determination. He taught that a leader must have vision and challenge boundaries. Most of all, he taught that for the right cause, a leader must be willing to sacrifice himself completely.

The metaphorical language used in these three papers as well as the other papers studied, is superior to literal language because it captures experiences and emotions better and it communicates meaning in complex, ambiguous situations where literal language is inadequate. Thus, metaphors are very useful instruments in studying people's attitudes and thought processes. Moreover, metaphors suggest ways of defining and using concepts. Through metaphors we are able to understand how people, in this case, define the term "leadership skills" in their everyday language.

The following list provides twelve selective examples of metaphors the students used to describe leaders. While the students were describing one particular individual in their papers, the concepts related through the metaphors are transferable to almost anyone who exhibits leadership skills.

Leadership Profile Metaphors

Bridge	Evokes security, strength, empowerment, vision and reliance to the followers who cross because of its solid foundation Provides greater access to new ideas and challenges by crossing many mediums Rises above to provide access and avenue to another side Permits new things to be seen; vision of the road ahead becomes clear
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Dancer	<p>Requires knowing the moves well enough to make the performance appear natural, graceful, beautiful and unrehearsed</p> <p>Uses fancy footwork to keep everyone happy</p>
Hawk	<p>Swift in action</p> <p>Careful, diligent, and expeditious</p> <p>Keen vision</p> <p>Powerful grip</p>
Lighthouse	<p>Unique</p> <p>Strong</p> <p>Dependable</p> <p>Comforting</p> <p>Visual</p> <p>Assuring</p> <p>Source of light and comfort</p> <p>Serves small vessels as well as large showing no partiality</p>
Magnolia Tree	<p>Provides shelter</p> <p>Germinates seeds</p> <p>Furnishes branches for climbing</p> <p>Demonstrates flexibility</p> <p>Yields beautiful blossoms</p>
Multi-plug Power Strip	<p>Generates and distributes energy</p> <p>Maximizes the amount of power and energy</p> <p>Allows others to maximize their talents and abilities</p> <p>Provides potentially greater outcome than originally planned</p>
Musician	<p>Selects the melody</p> <p>Sets the tempo</p> <p>Establishes the key</p> <p>Invites the players</p> <p>Brings together sections to create harmony and to complete the other players</p> <p>Provides new artistic opportunities to balance the old standards</p> <p>Makes changes through creative license</p>
River	<p>Wends its way through obstacles and treacherous terrain</p> <p>Pushes through what stands in the way</p> <p>Moves gently and toward something promised around the bend</p>

	Dodges foothills and mountains Pushes through impeding earth Makes way for those who would follow
Runner	Exhibits endurance and stamina to effect change Relies on preparation, discipline, and knowledge Trains all muscles, not just the legs Measures improvement in increments Keeps going even when experiencing difficulty in situations Never loses concentration Understands that only after completion of the season does a runner truly understand the level of improvement that has occurred with his ability to cope with problems associated with running
Scaffold	Provides temporary support until learners can become independent Provides freedom in learning through structure Grows with the student
Shopper	Has the skills of a hunter Pursues tasks with patients and single- mindedness Exhibits the determination of an explorer Finds the best deals Demonstrates joy in the hunt for better deals Looks for guarantees Willingness to pay for quality Patient about making a decision; willingness to shop around Informed about what is available
Wind	Invisible and yet her effects are observable Unpredictable—sometimes productive, sometimes destructive Can be a source of relief on a hot day or a source of terror during a tornado

Several identifiable threads or characteristics were exhibited in the majority of the papers. The person or object selected invariably exhibited leadership skills such as empowerment, vision, pursuit of excellence, and integrity. They led by example, giving detailed attention to planning and organization. They were compassionate and nonjudgmental, earning respect and giving it back. They encouraged growth and nurtured new potential in others. The papers attest to the fact that leaders value people, they empower others, they collaborate, they are good listeners and they are responsive. Inevitably, they are

good communicators, have tolerance, and mutual respect for their employees. The following table lists the most common adjectives used by the students to describe leaders and leadership skills.

TABLE 2
COMMON ADJECTIVES DESCRIBING LEADERS

- | | |
|--|--|
| <ul style="list-style-type: none"> • All empowering • Analytical • Collaborative • Creative • Dedicated • Detail oriented • Diplomatic • Engaged • Enthusiastic • Ethical • Flexible • Good communicators • Inquisitive | <ul style="list-style-type: none"> • Inspirational • Mediators • Nonjudgmental • Passionate • Perceptive • Positive • Powerful • Proactive • Respectful • Responsive • Supportive • Tolerant • Virtuous |
|--|--|

In a leader, substance is as important as style. Leaders need to celebrate success – everyone’s, not just their own. They need to create an environment where people can perform at their peak. Leaders should never settle for anything but each individual’s absolute best. In the end, most students concluded that it was not titles, positions, salaries, or stature that embodied leadership, but rather character, integrity, ethics, action, and vision.

SUMMARY

A particular emphasis was placed on analysis of metaphors in these college papers. The metaphors generated helped to create images of leadership skills that were illuminated through the analogies the students fashioned. In the process, their individual conceptions of leaders were conveyed in a way that would not have been possible without recourse to the metaphor. Metaphors are valuable teaching and learning tools for several reasons:

- They allow us to express abstract thoughts in terms of our past experiences thus connecting with the framework of the learner.
- They link concepts (left-brain functions) with imagination (right-brain functions) thus fostering a whole-brain scholastic experience.
- They stimulate the mind to further exploration by revealing insights into underlying connections or parallels among seemingly dissimilar phenomena.
- They contribute to understanding by utilizing one idea or situation to make sense of another.
- They facilitate communication by invoking multiple perspectives.
- They provide the student the opportunity to connect the learning with other concepts and ideas already known by the learner.

The force of metaphors comes not from providing new information about the world, but rather from a redefinition of information that is already available to us. As vehicles of understanding, they cultivate openness in language and give abstract concepts a reality. Moreover, metaphors are important due to their inherent ability to cross subject and discipline boundaries. Because metaphors speak to one’s own thoughts and perceptions, they are intensely personal expressions that not only recreate past experiences,

but also actually extend them. Metaphors are at the root of creativity. They provide alternative ways of seeing things that go beyond the reach of literal language.

ENDNOTES

1. It is not within the scope of this study to go into the fine distinctions traditionally made by linguists, grammarians, and philosophers on the differences between analogies, metaphors, and similes. It is sufficient for our purposes to accept the popular meaning of metaphor as A is B (e.g. the man is a bear).
2. Bloom identified three domains of educational activities: cognitive (mental skills), affective (growth in feelings or emotional ideas), and psychomotor (physical skills). He then divided these domains into subdivisions, starting with the simplest behavior to the most complex. The cognitive domain involves knowledge and the development of intellectual skills in degrees of difficulties; that is, the first one must be mastered before the next one can take place. The six categories in the cognitive domain listed in order of difficulty include knowledge, comprehension, application, analysis, synthesis, and evaluation.

REFERENCES

- Black, M. (1962). *Models and metaphors*. Ithaca, New York: Cornell University Press.
- Bloom, Benjamin S. (Ed.) (1984). *Taxonomy of educational objectives* (two vols: *The affective domain & The cognitive domain*). New York: David McKay.
- Bottini, G. et al. (1994). The role of the right hemisphere in the interpretation of figurative aspects of language: A positron emission tomography activation study. *Brain*. 117(6), 1241-1253.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.) (2000). *How people learn: Brain, mind, experience, and school*. National Research Council. Washington, DC: National Academy Press.
- Caine, G. and Caine, R. N. (1994). *Making connections: Teaching and the Human brain*. Menlo Park, CA: Addison Wesley Longman.
- Caine, G. and Caine, R. N. (2001). *The brain, education, and the competitive edge*. Lanham, MD: Scarecrow Press.
- Clouse, R. W. & Goodin, T. L. (2001-2002). "Entrepreneurs in action: A web case model." *Journal of Educational Technology Systems*, 30 (3), 311-321.
- Clouse, R. W. & Goodin, T. L. (2001). *Creating an entrepreneurial culture: Breaking the disciplinary boundaries*. Proceedings of the 2001 American Society for Engineering Education Annual Conference and Exposition.
- Clouse, R. W. & Goodin, T. L. (2001). *Entrepreneurs in action: A case-based model*. Proceedings of the Academy of Free Enterprise Education, 5(1).
- Clouse, R. W. (2004). *Entrepreneurs in action!; An on-line cross-discipline problem based learning environment for entrepreneurship*. Proceedings of the 2004 American Society for Engineering Education Annual Conference and Exposition.
- Danesi, M. (1989). The neurological coordinates of metaphor. *Communication & Cognition*. 22, 73-86.
- Gibbs, R. W. (1994). *The poetics of mind: figurative thought, language, and understanding*. Cambridge: Cambridge University Press.

- Gibbs, R. W. & Steen, G. (Eds.) (1999). *Metaphor in cognitive linguistics*. Amsterdam: John Benjamins.
- Goatley, A. (1997). *The language of metaphors*. London: Routledge.
- Gopnik, A., Meltsoff, A. N., & Kuhl, P. (1999). *The scientist in the crib: Minds, brains, and how children learn*. New York: William Morrow.
- Gozzi, R. Jr. (1999). *The Power of metaphor in the age of electronic media*. Cresskill, NJ: Hampton Press.
- Haskell, R. E. (1987). *Cognition and symbolic structures: The psychology of metaphoric transformation*. Norwood, NJ: Ablex Publishing.
- Haskell, R. E. (2001). *Transfer of Learning: Cognition, Instruction, and Reasoning*. New York: Academic Press.
- Hawkes, T. (1972). *Metaphor*. London: Methuen.
- Johnson, M. (Ed.) (1981). *Philosophical perspectives on metaphor*. Minneapolis: University of Minnesota Press.
- Kövecses, Z. (2002). *Metaphor: A practical introduction*. Cambridge: Oxford University Press.
- Lakoff G. & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Lakoff, G. & Turner, M. (1989). *More than cool reason: A field guide to poetic metaphor*. Chicago: University of Chicago Press.
- Mac Cormac, E. R. (1985). *A Cognitive theory of metaphor*. Cambridge: MIT Press.
- McCarthy, B. (1981). *The 4MAT system: Teaching and learning styles with right/left mode techniques*. 2nd Ed. Oak Brook, Illinois: EXCEL.
- Ornstein, R. (1997). *The right mind: Making sense of the hemispheres*. New York: Harcourt Brace.
- Ortony, Andrew. (Ed.) (1993). *Metaphor and thought*. Cambridge: Cambridge University Press.
- Piort, J. (2002). "My teeming brain:" *Understanding creative writers*. Cresskill, NJ: Hampton Press.
- Pugh, S. L., Hicks, J. W., Davis, M. & Venstra, T. (1992). *Bridging: A teacher's guide to metaphorical thinking*. Bloomington, IN: National Council of Teachers of English.
- Richards, I. E. (1936). *The Philosophy of Rhetoric*. New York: Oxford University Press.
- Rose, D. H. & Meyer, A. (2002). *Teaching every student in the digital age*.
Alexandria, VA: Association for Supervision and Curriculum Development.
- Sanders, D. A. and Sanders, J. A. (1984). *Teaching creativity through metaphor: An integrated brain approach*. New York: Longman.