

Electronic Journal for Inclusive Education

Volume 3

Number 2 *Electronic Journal for Inclusive Education*

Vol. 3, No. 2 (Summer/Fall 2014)

Article 2

2014

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Heslinga, V. (2014). A Starfish for Teaching: A Model of Hope for Students and Pedagogy, *Electronic Journal for Inclusive Education*, 3 (2).

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A Starfish for Teaching: A Model of Hope for Students and Pedagogy

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Abstract

Millenniums have offered ideas about how people think, cope, adjust, and survive. Nurturing and maintaining a heart and mind to help others, to be inclusive against incredible odds and societies that act more quickly to exclude needs symbols to aid progress. Cognition, observation, hope, imagination, perception, responsibility, and self-efficacy connect well to the starfish. Students of any age need images, symbols, role models, and practice in finding ways to triumph over life experiences that cause pain and discouragement. Starfish in actual examples, metaphors, and stories aid educators in building thinking, learning, and coping skills for healthy inclusive environments.

Keywords: nurture, symbol, hope, starfish, metaphor, inclusive, learning, diversity

A Starfish for Teaching: A Model of Hope for Students and Pedagogy

Virginia R. Heslinga, Ed.D.

Tidal pools, piers, rocky coasts, and beaches have sea creatures that entrance children, beach walkers, and vacationers even if they have not read Rachel Carson's, *The Edge of the Sea*, *Silent Spring*, *The Sea Around Us*, or *Under the Sea-Wind*. As a child visiting my grandparents' home each summer in Mid-coast Maine, I could spend hours searching sea pools amid rock crevices looking at creatures from anemones to urchins; starfish captured my attention most. Though they are not really fish at all, starfish stand as symbols of the sea's sorcery in connecting the sky's shapes to ocean's secrets. According to scientists, one can find more than 2,000 sea stars in the oceans of the world (*National Geographic*, 2012). The curiosity and wonder of a child's exploration, appreciation, and imagination often wither in educational environments geared to advancing intellectual knowledge and increasing test scores; students who struggle feel cut off, adrift, and discouraged. Across the full age range of public school classes, teachers can use a starfish to renew students' delight, curiosity, observation, hope and to build life skills.

Early associations with stars find songs, poems, and stories turning minds and eyes toward the heavens. Suddenly a slow walk along a seaside or the study of a tidal pool expands the star concept making a whole new set of connections and associations necessary. As Vygotsky and Kozulin (1986) explained, connections expand complex thinking skills necessary to building language and relationships. Stars in the sky, stars in the sea, stars used in languages around the world for that which glitters, amazes, and captures a high place in estimation. Building a conceptual framework for students requires openings that grab student attention, encouragement of inquiry, and practice with reflective thinking. Sandholtz (2011) emphasized the need for teachers to understand the significance of classroom presentations and experiences. Identifying

paradigms, issues, procedures, lesson structures, practices, and complex reasoning of students stands as a challenge for any teacher, and especially novice teachers. Choosing a theme or an image for a class, something as eye catching as a starfish, can help teachers and students to move through levels of learning like Bloom's (1961) educational objectives: knowledge, comprehension, application, analysis, synthesis, and evaluation.

Whether one uses the starfish symbolism and connections for one class, one week, one month, or one semester, students will review and renew knowledge of "stars," make linguistic connections, follow interdisciplinary paths, revive observation skills that include curiosity, and think about how they might renew and grow in spite of painful experiences. In Kahneman's, (2011) *Thinking, Fast and Slow*, an entire early section reveals the power of priming learners. As students confront an object from childhood stories or experiences, other ideas are stimulated. Kahneman stressed priming for learning does not reside just in words and concepts. Colors, sounds, symbols, pictures, motions, scents, and textures, prime readiness for advancing in thinking and affect physical responses. Best approaches in pedagogy, as described by Smittle (2003), included use of non-traditional methods, building a positive environment, stimulating discussion, and encouraging self-efficacy. Lopez (2011) explored connections between relevancy and literacy and found students engaged in building a broader cognitive understanding developed stronger critical thinking and awareness of the amazing diversity of their social world.

The most common species of starfish have the five arms that contributed to the creature's name, but starfish exist that have dozens of arms. Carson referred to starfish species as, "tribes," (1955, p.223) Even within tribes colors and other physical attributes differ. Generally the skin of a starfish, whether in tropical or cold water, protects them from predators with spiny growths on their brittle skin. Examining the tiny gills on the body with light sensors that function like eye

spots on the end of each arm, a flat disc at the center like a mouth where the stomach can emerge to take in food, sharp spines or grasping pincers, the grooves of rows of tube feet, a water vascular system, and suction cups on the tube feet stimulate curiosity and wonder at the variety within just one invertebrate species. The literal and specific observation of a creature and species can add to a neural basis for feeling connections to all life.

Presenting classes of any age and academic ability with visuals that show a myriad of differences within a species can lead to lessons in appreciating diversity within the human species. Goleman (2007) explained how appreciation and caring in collective groups relieves stresses that affect thinking, friendships, and life spans. Certainly relieving stresses and building positive social connections prevail as concerns of teachers for their students.

Equity, service to others, justice, and achievement compose new combinations of challenges for teaching. Sleeter (2011) accentuated the need for avenues to engage the attention of students in current multi-cultural classes. A starfish whether in art, English, history, music, psychology, math, or science helps educators to illustrate lessons, methods, and topics that can scaffold expectations, competence, and knowledge. Ravitch (2010) surmised the problems in education link to a lack of vision. Starfish as symbols enhance ideas about possibilities, but one metaphor will not provide enough connections for students unless students actively contribute to elaborating on the analogy for the metaphor object. Teachers under time constraints for covering topics often do not take time to explore metaphors. Students miss out on the cognitive and affective changes that come through scaffolding.

If educators want to find interdisciplinary, personal, and collective connections with their students to help young people grow in meeting the needs of others examples of growth and change within the world. Students can make the cognitive leaps from seeing how a starfish that

has lost a limb perseveres, grows, and eventually becomes strong and healthy again. Exploring a metaphor like the growth and survival of a starfish should emerge in lesson plans because students of diverse abilities will contribute different insights and perspectives on the amazing creature. Starfish provide a powerful visual and metaphor even if pictured without an arm limb or two. Carter and Pitcher (2010) not only affirmed the scaffolding that occurs when teachers use metaphors; they confirmed metaphors can provide idea based vehicles and targets that strengthen communication methods.

The language play with stars and starfish, with similes and metaphors guides students toward thoughtful observations, understanding symbolism, and using figurative language. One of the classic stories connected with starfish, *The Star Thrower*, (Eisley, 1978) confronts people with an elevating glimpse of kindness. Students meet a man who has a broad yet specific vision all in one moment. Goleman (2007) revealed research showed uplifting ideas in role models, stories, and illustrative examples “may be catching” (p.53). If teachers want to stir students to have impulses to make positive contributions to life, large or small, the emotional connections made through examples can inspire and motivate students to consideration and care.

Transfer from looking at the species and tribes of starfish to examining surface and survival elements in different human communities around the world. Education in the 21st century has instantaneous global connections, and teachers seek ways of building a sense of appreciation for adaptations, looks, sensitivities, and survival needs among people groups. Edwards (2011) in an overview of contributions to the *Journal of Cultural Diversity*, summarized articles from inclusion in schools and workforces to awareness of medical, social, and economic needs around the globe. Students can recognize literally and figuratively that many

arms must work together to meet human needs. They can come to an understanding of the value of diverse methods of helping others.

Other than their shape, the starfish attain great fame for regeneration. Because their vital organs grow in each arm, starfish can regenerate limbs or in some cases whole bodies from one severed limb (National Geographic, 2012). Carson (1955) described the *Linkia* starfish that habitually break off an arm which can then grow a whole new body of four more arms. People rarely think of times of brokenness as times to regenerate, yet an examination of lives of leaders and achievers show examples of individuals who built upon the ashes or pain of hurts, deprivation, destruction, and prejudices.

Viktor Frankl (2000a, 2000b, 2006) tells his story of enforced life change from successful doctor to concentration camp prisoner and of the awful destruction that occurred around him and within him. Regenerating his strength and spirit at the end of the war took years, but he knew what led to ultimate meaning in life, care for others. Frankl had practiced what he could to maintain his humanity even in the years in concentration camps.

Jimmy Santiago Baca (2010) shared his story of regeneration, a personal revelation in his transformation from desperation as a child of a single alcoholic parent, and then caught in the violence as a gang member and habitual criminal to a person with power to regenerate. Baca's stories and poems show positive outcomes for life through healthy expression and relational actions. Cut off from family relationships, from a romantic relationship, from any relationship of hope, Baca found the power of regeneration through new growth in an area no one would have imagined for him (Baca, 2001). A toughened frightening imprisoned criminal became a poet who upon release from prison had a new and different life than he had ever imagined.

Mary Mcleod Bethune (2001) had a desire to build a better world overcoming poverty, ignorance, and prejudice. Bethune moved from a childhood as a daughter of emancipated slaves to starting schools, colleges, and to advising United States presidents on education for the nation. Her life story and essays reveal a power and commitment to generate and regenerate self, others, communities, and a nation. McClusky and Smith (2001) showed Bethune's beliefs about education, lifting young people out of hopelessness and poverty through lessons geared to head, heart, and hands led to even more examples of metaphors for overcoming difficulties and appreciating diversity.

Merrill (2011) focused on the events leading to a feeling of brokenness that people encounter. Often struggling students feel more broken and pained than anyone around them realizes. The painful experiences Merrill described caused individuals to confront the choices Frankl (1978) highlighted years ago, choices to nurture meaning or materialism, soul or pride, relationships or independence. Students can face the painful experiences in their own lives. They need guidance and positive ideas to consider how best to generate or regenerate actions and attitudes for overcoming adversity. From the powerful image of a starfish losing a limb to reading and discussing lives of people who have overcome great pain and loss, students can gather ideas about how they can surmount shattering life experiences.

Starfish have to depend on sensory perceptions of each arm rather than a brain center. Students can consider how much their own level of dependence on their senses, the dangers of living on the basis of feelings, denying their feelings, and insights that can come through using senses-habitually ignored. Crucial to making personal and collective progress, lessons and discussions can examine the unhealthy and healthy ways people express feelings. Heen (2004) provided five constructive steps when communicating with people who have a different opinion:

Remember, appreciate, take responsibility, share feelings, set boundaries. Recognizing one's feelings and preferences lets students comprehend the influence of biases. Students need to understand the differences between discussions, arguments, and fights and how to advance in positive communication even when disagreeing with another person.

Shields (2006) cautioned that dependence on rational and technical methods alone deprives students of a wide range of learning experiences. Whether considering the brain's two systems, described so well in fast and slow attributes by Kahneman (2011) or as the high and low roads in Goleman's (2007) analysis of *Social Intelligence*, or Brafman and Beckstrom's (2007) contrast of starfish and spiders. Students can learn to recognize their own level, preferences, and needs in thinking habits, use of their senses, and potential for blended abilities.

From Plato's cave to Pattakos's (2008) ideas on self-created prisons, teachers need to plan pedagogical practices that move students into light and freedom in spite of life stress and pain. Frankl's principles for discovering meaning in spite of pain and problems can provide ideas for pedagogical practices that lead to regeneration. Wicks (2003) after years as a counselor working with victims who had survived some of the world's most shocking traumatic situations shared lessons learned through examining the crushing fragmenting experiences effects. Wicks affirmed people can act to gain inner strength in spite of horrific trauma. Writing reflectively, via memoirs, and short narratives fits many disciplines and along with the starfish metaphor provide a venue for students to analyze, vent, and discover hope.

Allen's (2010) examination of dysfunctional families and mental illnesses coincides with concerns in America's schools over more relational problems, violence, and addictions among students. A focus on a peaceful creature helps to build a safe and empowering environment, and highlights flexible organization, regeneration, and living in groups that collaborate peacefully.

Self efficacy, intrinsic motivation, and understanding life choices appear in Bandura's (1997) descriptions of ways teachers can empower students. Bandura (2006) explained how a student's beliefs about possibilities for success and failure affect that student's ability to learn. With the starfish, teachers can create a powerful visual to align with life lessons from over-comers. Learning about survivors who went on to help others expands possibilities for building life coping strategies, imagining a better future, and expanding learning abilities.

Sharing of stories needs powerful presentation. Coles, (2004) Keiley, (2012) Bunting, (2012) and Goleman (2007) confirm the importance of the need for vivid cohesive storytelling when trying to move listeners to higher levels of thinking, connecting, and caring. Many different styles and age appropriate stories, memoirs of overcoming, appear in print. Teachers can lead students to find help in reading others' stories by allowing the students to make a choice from a comprehensive list. One of the ways to lead is by example, by sharing a story that has powerfully moved the teacher to a higher level of living and learning.

As educators regard a starfish, they can think about how they do or do not consider the senses of the students when preparing lessons. Starfish survive by their senses. They cannot think. Too often the joy in learning has dissipated because the class focus is on thinking rather than maintaining an environment for learning inclusive of emotions and senses. The starfish with its limited body abilities still provides lessons for teachers and students on the essentials of moving, reaching, eating, sensing, adapting, generating, and regenerating. Teachers can examine plans for classes to see where students have the opportunity to hear inspiring messages and to move, to reach, to feed their senses, and to work with one another as part of the learning process.

Brafman and Beckstrom (2006) consider the starfish qualities of life in the twenty-first century, a time when businesses, organizations, and communities have moved away from the

once common and preferred hierarchical model of accomplishing tasks. Brafman and Beckstrom (2006, p. 56) found the local and global communities of Wikis, Craig's List, Apache (s), Amazon's user ratings, terrorist cells, and song or movie sharing on peer to peer networks have many features found in starfish: "no one in charge, no headquarters, amorphous division of roles, if you take out a unit the organization is unharmed; knowledge and power are distributed; flexible, decentralization" necessary to survival. Who would guess looking at echinoderms with a skin covering akin to armor and no head or brain for centralized thinking that one could analyze businesses, threats, and common cultural modes of sharing?

Adding the starfish to lessons, the echinoderm, whether the *asterias rubens*, *asterias forbesi*, or any of the other dozens of invertebrates of their species, allows one of nature's intriguing creatures to provide a focus for scaffolding knowledge and experience. Starfish shown and discussed in a classroom furnish an interesting symbol for reviewing knowledge, expanding comprehension of science, metaphors about overcoming difficulties, and coping with pain and frustration in daily life. Evoking images connects to emotions that cushion and clear the way for more layers of learning and decision making. Starfish, seemingly simple creatures of the sea, can aid interdisciplinary learning and personal growth. The sea creature models hope while renewing a student's ability to analyze, wonder, explore, appreciate, and imagine.

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