

Teaching Self-Care Skills Using Effective Learning Theories

INTRODUCTION

According to the American Massage Therapy Association Industry Report, the second most common reason why massage therapists leave the profession is due to injury. This fact indicates that there should be some formidable concern for the safety and longevity of massage therapists in the workplace. An excellent way to analyze this is with an ergonomics perspective. The premise of ergonomics is to promote the safety of the worker by analysis of work tasks with the purpose reducing injury risk factors. While we all emphasize the basics of general body mechanics in massage school programs, we do not necessarily teach self-adaptation and kinesthetic awareness. Using experiential and transformative learning concepts, self-observation and reflection, and foundations of ergonomics principles, this workshop will help you teach students how to achieve their best, most efficient work so that they can have long and successful careers.

USING EXPERIENTIAL AND TRANSFORMATIVE LEARNING THEORIES

INTRODUCTION AND RATIONALE

Studies in instructional design suggest that the practices of experiential and transformative learning are very effective with adult learners, as developed by two notable original theorists, philosopher/psychologist John Dewey and sociologist Jack Mezirow. Dewey suggests that we do not learn from all experiences; however, the ones that generate quality are lasting and influential. Furthermore, Mezirow suggests with transformative learning that our reality is shaken when our habitual ways of viewing things no longer exists (Boucoulalas & Lawrence, 2010). When teaching body mechanics and self-care to students, it is important for an instructor to create these “transformative experiences” in the classroom and lab setting. When our students become practitioners, they will continue to demonstrate sound critical thinking by keeping their “tools” safe and maintained while working and employing self-care techniques that are helpful to them individually and perpetuate a lasting effect through career longevity and sustainability.

EXPERIENTIAL LEARNING THEORY – DEWEY AND KOLB

Learning from experience has roots in philosophy as presented by John Dewey. His view arose from his dissatisfaction with the traditional educational structure, which had been entrenched in the emphasis of rote knowledge rather than critical thinking. Dewey advocated for education to become more progressive by allowing for emphasis in project-based learning and application of life skills to what was being taught; his belief was that humans instinctively connect their learning with their notable

interactions in daily life, which lent itself to creating meaningful experiences that put more emphasis on recall of concepts, skills, or even rote knowledge in a more natural way. Dewey's concepts caused many educators back in his time to redesign their curricula reflecting this; however, due to the rise of interest in space exploration in the late 1950's, education reverted back to more emphasis on science and math factual content and less focus was given to experience (Cox, 2010).

In the 1980's, David Kolb took experiential learning to a more modern level by creating a cyclical model defining the pathway of how we learn through experience. Kolb's model suggests that there are four (4) modes in which each mode requires a different ability to learn from it: Concrete Experience (CE); Abstract Conceptualization (AC); Reflective Observation (RO); and Active Experimentation (AE). From each of these modes, a learner develops their knowledge in unique ways, creating a complete synthesis of higher order thinking and learning integration. CEs help learners to develop affectively with sensing and feeling abilities. ROs develop perception with better observational and awareness skills. Complexity in thinking or symbolic skills come from ACs. Behavioral change is developed through AEs. Kolb's Experiential Learning Cycle not only takes learners through these cycles but also identifies points in the cycle where the concepts are potentially grasped by the learner but also where the learning transformation occurs (Atkinson & Murrell, 1988).

Including experiential learning within a course design requires identifying a higher cognitive level of taxonomy to be achieved through delineating them in the course objectives and utilizing techniques within the instructional process of the lesson plan. Hamilton and Klebba (2011) offer a course design matrix which provides experiential content at all levels of instructional design. Some suggested components include in-class exercises and structured simulation activities for simpler objectives and service learning projects and internships for meeting higher cognitive levels.

Kolb's Experiential Learning Cycle has so many applications in massage therapy education, particularly as it pertains to self-care. Physical learning activities and exercises that emphasize a specific concept can help to create lasting effects which are imperative to reducing potential risk factors and developing self-care skills that can sustain a career span. However, massage therapy students cannot be "told" or "helped" to reach these critical thinking levels; they must experience it on their own with some poignant and strategic instructional guidance (Davis & Arend, 2013; Cox, 2010).

TRANSFORMATIVE LEARNING THEORY – MEZIRROW, DIRKX, AND CRANTON

Proper self-care requires autonomous thinking to determine what is best for the individual; this is the cornerstone for transformative learning. Its architect, Jack Mezirow, believes that the way we can affect change through learning is by taking to account one's frame of reference which encompasses two (2) dimensions, habits of mind and point of view. We develop habits of mind from influences in cultural, social, educational, economic, political, and/or psychological contexts and in turn, they can shape one's point of view. Frames of reference can change if the assumptions are modified through critical reflection (Mezirow, 1997). When we have these epiphanies, it creates this implied "transformation" of mindset through an expansion of consciousness that occurs through task-oriented (objective) or self-reflective (subjective) reframing (Dirkx, Mezirow, & Cranton, 2006).

The transformative learning process involves six (6) components of learning awareness:

- 1) Recognizing an alternative way of thinking may provide new insights.

- 2) Understanding the sources, consequences and overall nature of a known belief.
- 3) Reflecting critically on that belief and its supporting assumptions.
- 4) Validating a new belief by testing the truth of its claims or through discourse to assess its justification in developing best judgement.
- 5) Rationalizing the potential consequences of taking action or adopting a new viewpoint.
- 6) Taking reflective action on the validated belief.

(Dirkx, Mezirow, & Cranton, 2006)

Critical thinking and reflection are terms that are used so frequently and interchangeably in educational contexts, but to effectively employ transformative learning in an adult learner classroom, some structure to these concepts needs to be present to reach the desired learning outcomes. An active learning model should be used by employing a “disorienting dilemma” situation to foster deep transformation. Some strategies include (1) using a “messy, ill-structured”, practice-based problem-solving exercises (i.e. case studies) with a pedagogical focus; (2) interactive and collaborative learning group activities; (3) consensus group writing teams; (4) individual and team debriefings as a result of a learning experience; (5) reflection activities; and (6) journal writing. (Merriam & Bierema, 2014)

BASIC DEFINITIONS OF ERGONOMICS CONCEPTS

Body Mechanics - The application of physical principles to achieve maximum efficiency and to limit risk of physical stress or injury to the massage therapist; analysis of the action of forces on the human body when it is moving. (Medical Dictionary of the Health Professions, 2012)

Kinesthetic Awareness - An ability to be aware of muscular movement and position. By providing information through receptors about muscles, tendons, joints, and other body parts, the kinesthetic sense helps control and coordinate activities such as walking and talking; internal connection of how the body feels when it moves. (Mosby’s Medical Dictionary, 2009)

Ergonomics - The science and art of designing a job or work task to fit the worker that helps the body move efficiently, referencing the aspects of physiology, biomechanics, psychology and other areas for proper adaptation of work tasks. (U.S. Dept. of Labor, 2000)

Anthropometry -The branch of the human science that studies the physical measurement of the human body, particularly size and shape, used in ergonomics to design working spaces and develop widely used products such as furnishings, cars, tools, etc.

Industrial Hygiene - The science and art devoted to the anticipation, recognition, evaluation, and control of those environmental factors or stresses arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort among workers or among the citizens of the community. This is accomplished by using environmental monitoring and analytical methods to detect the extent of worker exposure and employ engineering, work practice controls, and other methods to control potential health hazards. (U.S. Dept. of Labor, 1998)

ERGONOMICS FACTS AND CONCEPTS

- Repetitive Stress Injuries (RSIs) effect 1.8 million workers per year, accounting for more than 30% of all workplace injuries
- Cost of RSIs = approximately \$17 - \$20 billion per year
- Average cost of a work-related injury claim is between \$20,000 - \$100,000 per worker
- Dept. of Labor - musculoskeletal disorders (MSDs) “are the most widespread occupational health hazard facing our nation today”

(Sound Ergonomics, 2015; U.S. Dept. of Labor, 2017)

Common Body Mechanics “Red Flags” When Performing Massage:

- Compressing part of the body
- Bottom and top half out of alignment, torso twist
- Feet too wide or too narrow, too long or short
- Excessive spinal curves – tendency for more lordotic or kyphotic positioning
- Back foot out of alignment
- Weight only on back foot
- Knees or elbows hyperextended and locked at times
- Standing fixed in one place, not enough movement around the table
- Using only a few of your tools, repetitive use of same tools
- Head tilt
- Wrist twist
- Overreaching and/or elevated shoulders

(Dixon, 2001)

Ergonomics is a multidisciplinary approach. Job tasks are analyzed according to four (4) core areas:

- 1) **Occupational Medicine** – safety, environment, and risk are evaluated for potential injury factors
- 2) **Occupational Psychology** – evaluation of job satisfaction (stress, mental, and emotional challenges)
- 3) **Engineering & Design** – efficiency of the work task functions and equipment being used
- 4) **Management** – operating costs affected by work performance, frequent absences and sicknesses, or labor turnover

(Pheasant, 1991)

NEWTON’S LAWS OF PHYSICS + ONE

1st Law of Inertia: A body at rest, stays at rest. Requires an application of force to cause an object to stop, move, or change direction.

- Potential Risk Factor - Thighs locked, knees locked – uses more of the upper quarter through shoulder, neck and arms to exert forces
- Creation of fatigue becomes a source of potential injury; inefficient, uncomfortable – both for you and client

- Body in motion most easily continues in a straight line; awareness of body alignment as it moves where it is the most efficient
- Good alignment is top of head to coccyx straight, ASIS leading the direction you are moving

2nd Law of Acceleration: The bigger the body, the harder it is to change.

- Apply force that is proportional to the mass, less is more – modify force through indicators from the client (pain, tolerance of pressure, tissue softening)
- The more dense, thick, tight – need to go deeper to effect a change, BUT not push with brute strength
- Change your direction and/or speed of strokes
- Need efficiency from the 1st Law to obtain the appropriate level of force needed to execute the 2nd Law – using body weight to create force needed

3rd Law of Action & Reaction: For every action there is an equal and opposite reaction.

- Cannot PUSH into the tissues when they resist, creates an exertion of added effort on the therapist – requires effective application of 2nd law to realize the 3rd law
- Allow tissues to adjust to pressure first, then “sink in” – more efficient and effective when working with physical properties to reach goal
- Tissues react with too much PUSH – instinctive opposite to the force, will “push you out”

The “Plus One” - Structural Alignment: Ability to form, maintain and adjust positioning to achieve efficient relationship between body parts in movement.

Best approaches to creating optimal Structural Alignment

- Feet facing in direction of the stroke
- Keep spinal curves intact
- Line up body behind the hands
- Keep thumb close to the fingers
- Avoid hyperextension of elbows and knees (pushing instead of sinking)
- Feel shoulder blades moving easily (sink instead of push)

(Biel, 2016; Dixon, 2001)

COMPLETED RESEARCH

“Improving Body Mechanics Using Experiential Learning and Ergonomic Tools in Massage Therapy Education” – Robin B. Anderson - being reviewed for publication through the International Journal of Therapeutic Massage and Bodywork (IJTMB). IRB approval obtained through Colorado State University (ID Number 070 – 18H; valid through April 19, 2020, 3 year approval).

Use of the Rapid Entire Body Assessment (REBA) and Rapid Upper Limb Assessment forms – Assesses risk factors frequently present when working (Neck, Shoulders, Wrist and Forearm positioning, Legs and Feet, Torso) and repetitive movement actions, which also pose an additional correlating risk.

(Middlesworth, 2017)

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