

Constructivist Theory: Learning to Ride a Motorcycle The Motorcycle Safety Foundation Basic *RiderCourse*®

Debra Finlayson, San Francisco State University, USA

Designed as an experiential learning opportunity beginning with low learner involvement progressing to high involvement task mastery; a primary goal of the MSF Basic *RiderCourse*® provides an introduction to the fundamentals of safe and responsible motorcycling. Adult and contemporary educational theories and practices in brain-based, accelerated learning principles, motor skill learning and development, along with solid learner-centered instructional techniques present a low risk, positive learning environment. Participants in this session will have an opportunity to review examples of the course materials and discuss the many areas where constructivist orientation to learning applies in practice.

The constructivist orientation to learning is a complex web of theories, perspectives and practices primarily rooted in the model of Adult Learning or Andragogy. It is noted (Merriam, Caffarella, Baumgartner 2007) when Adults create meaningful learning experiences they construct their new knowledge, viewed as important to them, in very individual and social contexts. Background or historical realities are foundational to the individual adult experience. A teacher or instructor's role in this process is viewed as a facilitator or negotiator of learning aligned with the learner. Leading theorists, Candy, Dewey, Lave, Piaget, Rogoff, von Glaserfeld, and Vygotsky identify that manifestation of learning occurs through experiential, transformational and situated learning, reflective and communities of practice. (Knowles, 1990) identifies five key assumptions of Andragogy as, (1) adults are self motivated, (2) learning is life-centered, (3) adults bring a rich history of experience, (4) adults have a deep need for self direction and (5) adults want control of their learning experiences.

(Meier, 2000) cites seven foundational principles for accelerated learning (1) learning involves the whole mind and body, (2) learning is creation, not consumption, (3) collaboration aids learning, (4) learning takes place on many levels simultaneously, (5) learning comes from doing the work, with feedback, (6) positive emotions greatly improve learning and (7) the image brain absorbs information instantly and automatically. Brain-based learning concepts lead us to the conclusion that learners have an overwhelming need for meaningful experiences optimized by relaxed alertness, orchestrated immersion and active processing of the information. (Jensen, 2000).

More adults today own and operate motorcycles than ever before. Accident and injury rates have soared during the past decade signaling the critical importance of learning safe and responsible motorcycle operations. The task of designing a curriculum that engages the diversity of adult learners and learning modalities, and that applies a strategy of placing the responsibility of learning upon the participant with methods that accelerate the learning experiences toward a goal of transferring that knowledge to the real world of on street riding, the Motorcycle Safety Foundation's developmental processes relied heavily upon the wealth of science, adult and contemporary learning research, brain based, accelerated, and motor skill learning as underpinnings for meeting these learning objectives in its new Basic *RiderCourse*.

Released in 2001, with over three and one half years of development and testing, the Basic *RiderCourse* shifted the learning paradigm of instructor centered "sage on the stage" to a learner centered methodology where students assume an active role in the learning and decision making process. The learning environment, characterized as high challenge and low threat

engages the learner beyond surface knowledge in the context of relaxed alertness. Learner motivation is intrinsic to the low stress environment that promotes a better acquisition of skills, better transfer of the learning leading toward excellent judgment and self control. (*Safe Cycling*, 2007).

Prior to the 2001 release, motorcycle rider safety education was modeled in the traditional behaviorist orientation wherein learners were “instructed” to perform and think in a single rigid manner, rewarded by the “instructor” if performance was acceptable or punished if not. The individual was ignored and transfer of learning to a real traffic world environment from the classroom or practice range was in question, leaving participants with potentially excellent skills and questionable judgment in managing their risk and behaviors.

A 15-hour non formal learning experience, the MSF Basic *RiderCourse* engages the cognitive aspects of learning with approximately 5 hours of dynamic learner centered classroom interaction. Learners form small groups to discover and discuss such topics as risk awareness, acceptance and management; selection of appropriate riding gear for safety and protection, location and operation of motorcycle controls; basic riding skills such as straight line riding, turning, shifting gears and stopping; strategies for safe street operation and impairments, all guided by an engaged classroom coach or facilitator. The setting is social in nature as learners are exposed to the general culture of motorcycle riding and share their past experiences and new learning experiences with their peers.

Engaging the physical task of motor learning and development, two 5-hour practice sessions on consecutive days comprise the “range” or on-cycle activities that are characterized as situated in an authentic setting utilizing the motorcycle as the “tool” for developing their riding skills. Divided into two distinct levels, basic motor skill development comprises day one activities followed by fine-tuning the skills during day two; once again, the safe and positive learner centered approach is facilitated by a RiderCoach.

The motor skill development principles applied to the on-cycle experience focus on gross muscle memory skills practiced before they are finessed to finer skills; information feedback (proprioceptive or perceptual decision making feedback) is critical for learning and development with accuracy of skill emphasized over speed of movement. (Schmidt and Wrisberg, 1991, 2004)

A variety of progressively more difficult exercises or drills maximize the learners’ opportunity to build and add finesse to their riding habits along with random opportunities for traffic negotiation decisions such as time and space margins, crossing paths of travel and avoiding potential hazards. Timely feedback is non-verbal while riders are in motion and verbal when they are at a stopped position, which is essential from the RiderCoach whether it be a positive “thumbs-up”, rider-specific skill development technique or a quick-tip reminder. In this way, individual riders construct the finer skills in their own way. At the conclusion of each exercise, participants gather to discuss with their peers what they learned, what worked, what did not, and how they initiated the mental or decision-making process toward achieving the objective of each exercise, all designed as an additional opportunity where participants, guided by learner-centered questions posed by their RiderCoach, to share and deepen their new knowledge.

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